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United States Government Accountability Office  
Washington, DC 20548

November 5, 2009

The Honorable Carl Levin  
Chairman  
The Honorable John McCain  
Ranking Member  
Committee on Armed Services  
United States Senate

The Honorable Ike Skelton  
Chairman  
The Honorable Howard McKeon  
Ranking Member  
Committee on Armed Services  
House of Representatives

Subject: *DEFENSE INFRASTRUCTURE: The Army Needs to Establish Priorities, Goals, and Performance Measures for Its Arsenal Support Program Initiative*

The Army has three government-owned and operated manufacturing arsenals that it considers vital to the Department of Defense's (DOD) industrial base because they provide products or services that are either unavailable from private industry or ensure a ready and controlled source of technical competence and resources in case of national defense contingencies or other emergencies. These three arsenals are Pine Bluff Arsenal, Arkansas; Rock Island Arsenal, Illinois; and Watervliet Arsenal, New York. Pine Bluff's core mission is the production of conventional ammunition and other types of munitions. Rock Island's core mission is weapons manufacturing, and the arsenal is home to the Army's only remaining foundry. Watervliet is the Army's only cannon maker and also produces other armaments and mortars.

Historically, the Army's arsenals have generally had vacant or underutilized space. For many years the Army has not provided the capital investment needed to keep pace with modern manufacturing requirements and retain core skills in the arsenal workforce. Additionally, the arsenals have generally had lower workloads during peacetime, but since the onset of the wars in Iraq and Afghanistan they have experienced a surge in workloads to provide vital manufacturing capabilities, such as producing armor kits to harden Army personnel vehicles after it was found that the Army's existing vehicles were susceptible to improvised explosive devices.

During the defense drawdown of the 1990s, the manufacturing arsenals were struggling from a diminishing and fluctuating workload, high product costs, significant reductions in force, and a fear that their core skills were being lost. The National Defense Authorization Act for Fiscal Year 2001 authorized the Arsenal Support Program Initiative (ASPI), as a demonstration program designed to help maintain the viability of the Army's manufacturing arsenals.<sup>1</sup> The Army Materiel Command provides oversight for the ASPI program and the TACOM<sup>2</sup> Life Cycle Management Command exercises program management. The ASPI program manager for all three arsenals resides within the TACOM Life Cycle Management Command located at Rock Island.<sup>3</sup> The Army has entered into facilities use contracts with local nonprofit economic development organizations that serve as site managers to market underutilized space on Rock Island<sup>4</sup> and Watervliet for use by commercial tenants who either rent the space or provide services in kind to the manufacturing facilities. Pine Bluff has had limited participation in the ASPI program and currently does not have a site manager. All revenue generated from ASPI leasing agreements is provided to the manufacturing facilities on the arsenals and is intended to help reduce the arsenals' overhead, maintenance, and product costs.

The ASPI authority sets forth 11 purposes for the program, including utilizing and employing the arsenals' skilled manufacturing workforce by commercial firms; encouraging private commercial use of underutilized government facilities; reducing the government's cost of ownership and the cost of products produced at the arsenals; and fostering cooperation between the Army, state and local governments, and private companies in the development and joint use of the Army's arsenals. (See table 1 in the Background section of this report for a complete listing of the 11 ASPI purposes). While the Army did not advocate for the initial ASPI authority, it has adopted the purposes as its broad goals for the program. Additionally, although a 2007 Army report<sup>5</sup> to the congressional defense committees recommended permanent authority for the program, the Army has not included funding for ASPI in

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<sup>1</sup> Pub.L. No. 106-398, § 343 (2001).

<sup>2</sup> TACOM is now the official command name for the organization formerly known as the Army's Tank-automotive and Armaments Command.

<sup>3</sup> Pursuant to a 2005 base realignment and closure recommendation, the ASPI program office is scheduled to move to the TACOM Life Cycle Management Command in Warren, Michigan by September 2011.

<sup>4</sup> Beginning in fiscal year 2006, Rock Island was split into two organizations—the Rock Island-Joint Manufacturing and Technology Center, which is responsible for the industrial manufacturing mission on the arsenal, and the U.S. Army Garrison-Rock Island, which provides facilities and base operations support and services to all installation tenants. ASPI projects may be within the industrial or garrison areas at Rock Island.

<sup>5</sup> The ASPI authority directed the Army to submit a report assessing the implementation of ASPI to the congressional defense committees by no later than July 1, 2001. This report is not required on an annual basis.

its annual budget requests. Rather, Congress has funded ASPI through congressionally directed funds in annual appropriations acts and conference reports. Through July 2009, the Army has received almost \$74 million dollars for the ASPI program. Nearly all of these funds are used to renovate underutilized space and attract commercial firms to the arsenals.

The conferees on the National Defense Authorization Act for Fiscal Year 2008 expressed concern that ASPI has had limited success in contributing to the retention of core manufacturing skills at the arsenals, and they have noted that the commercial ventures the program has attracted to the arsenals appear to have minimal connection to the arsenals' core missions of producing munitions, armaments, and other military products. In the National Defense Authorization Act for Fiscal Year 2008,<sup>6</sup> Congress extended the ASPI program authorization through fiscal year 2010, and in its accompanying report expressed the expectation that DOD should show progress in the selection and execution of projects that enhance the arsenals' core missions and related workforce skills and result in contributions to the recapitalization of plants and equipment in the additional two years of ASPI authorization provided by that statute.<sup>7</sup>

The conference report accompanying the National Defense Authorization Act for Fiscal Year 2008 directed us to review the ASPI program and report to the defense authorization committees. Our objective for this review was to determine the extent to which the Army has addressed the intended purposes set forth in the ASPI authorizing legislation. Additionally, in response to congressional interest, we have provided information in enclosure 2 of this report that discusses other available authorities that the Army uses or could use to improve the viability of its manufacturing arsenals. In response to direction by the conferees to conduct a business case analysis that examines the cost, return on investment, and economic impact of the ASPI program, the Congressional Budget Office expects to submit its report later this year. Accordingly, our review did not address those aspects of the ASPI program.

## **Scope and Methodology**

To determine the extent to which the ASPI program has addressed its intended purposes, we reviewed the Army's 2007 report to the congressional defense committees on the results of the ASPI program since its inception. We also assessed the criteria used by the ASPI program manager to determine whether ASPI tenants have addressed the purposes set forth in the ASPI authority. While the Rock Island and Watervliet site managers have office space on the arsenals, for the purposes of this review, we did not consider the site managers as ASPI tenants because of their unique role of marketing the ASPI program to commercial companies and managing

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<sup>6</sup> Pub L. No. 110-181, § 341 (2008).

<sup>7</sup> H.R. Conf. Rep. No. 110-477, at 881-882 (2007).

the leases for tenants secured under the program. Additionally, we contacted officials from the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology; the Army Materiel Command; and the TACOM Life Cycle Management Command to obtain policies, guidance, plans, and internal control procedures for the ASPI program. We also met with the ASPI program manager, and the ASPI site managers at Rock Island and Watervliet, who are responsible for marketing ASPI to commercial firms, as well as Army officials at Pine Bluff, to discuss whether the ASPI program purposes were being addressed and any issues that may hinder program success. We further discussed and analyzed the strategies taken by each arsenal to address ASPI purposes. During our visits to the manufacturing arsenals, we judgmentally selected some ASPI tenants to interview based on their availability (10 out of 44 total tenants) to ascertain their views on how the APSI program is working. In order to provide additional information to the congressional defense committees on the Army's use of other authorities to improve the viability of the arsenals, we reviewed various other legislative authorities involving Army industrial facilities and public-private partnerships to determine whether such authorities are applicable for use in improving the viability of the arsenals. We briefly summarize select provisions of each of these authorities in enclosure 2 of this report. We interviewed Army headquarters and arsenal officials to determine whether these or any other authorities had been employed for the benefit of the Army's arsenals, and we obtained their perspectives regarding any challenges that may exist in using these authorities to attract commercial tenants. We conducted this performance audit from December 2008 through November 2009 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Summary

Although the Army's three manufacturing arsenals have secured tenants that collectively address all but one of the purposes of the ASPI authority, the arsenals have had limited success in attracting ASPI tenants that enhance their core manufacturing missions and related workforce skills. According to the Army, 44 tenants had been secured under the ASPI program through the end of July 2009 (27 at Rock Island, 16 at Watervliet, and 1 at Pine Bluff), and each tenant addressed at least 1 of the 11 ASPI purposes.<sup>8</sup> However, the Army has determined that, of the 44 tenants, only 4 are engaged in activities that have helped to strengthen the arsenals' core manufacturing capabilities or related workforce skills. ASPI site managers are generating operating revenue in the form of rent paid by ASPI tenants and have been more successful in securing commercial tenants needing administrative office space, which tends to be more profitable than leasing manufacturing space. Nonetheless,

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<sup>8</sup> The 44 tenants we have identified do not include the site managers at Rock Island and Watervliet.

while ASPI tenants are generating revenue for the arsenals, program and site managers have generally been free to implement the program using a variety of approaches that may not be significantly contributing to the core manufacturing missions of the arsenals because the Army Materiel Command has provided them with only limited guidance. Given the discretion afforded by the ASPI authority—which does not prioritize its 11 purposes or require that all 11 purposes be addressed—the Army has missed an opportunity to ensure that program execution is aligned with its own priorities because Army guidance does not specify which of the authority’s 11 purposes the Army considers to be its highest priorities. Further, the guidance does not incorporate the priorities identified in the conference report accompanying the National Defense Authorization Act for Fiscal Year 2008, which encouraged the Army to recruit more tenants that enhance the arsenals’ core missions and workforce skills. Additionally, the Army has not developed a strategy that describes the methods it plans to use to achieve its highest priorities and has not established performance goals and measures for the ASPI program. Our prior work has emphasized that performance goals should be measurable and results-oriented.<sup>9</sup> Although the Army has adopted the 11 ASPI purposes as its broad goals for the program, these goals can not be easily quantified. Similarly, while the Army has developed some metrics to assess the program, existing metrics measure only the number of ASPI contracts secured and cost savings or cost avoidance to the Army, rather than the extent to which the program is making progress toward achieving the broad goals represented by the purposes established in the ASPI authority. Without clearly defined priorities, performance goals, and measures, the Army may be unable to respond to congressional direction or ensure that its own interests are being addressed. Further, the arsenals could be at risk of diminished core manufacturing capabilities that are considered vital to the national defense, and thus these skills and capabilities may not be readily available when needed. We are making three recommendations to improve the Army’s execution of the ASPI program to help ensure that it addresses the broad goals of both congressional conferees and the Army by distinguishing its highest priorities among the ASPI purposes and establishing a strategy that includes measurable goals and performance measures to monitor progress the Army has made toward addressing the ASPI purposes.

We provided DOD with a draft of this report for comment on September 1, 2009, but received no comments. We also provided the draft report to the ASPI site managers for the Rock Island and Watervliet arsenals and incorporated their comments as appropriate into this report.

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<sup>9</sup> GAO, *Military Transformation: Clear Leadership, Accountability, and Management Tools Are Needed to Enhance DOD’s Efforts to Transform Military Capabilities*, [GAO-05-70](#) (Washington, D.C.: December 2004).

## Background

The core missions of the three Army government-owned and operated manufacturing arsenals are as follows:

- Pine Bluff Arsenal, Arkansas produces, renovates, and stores a wide array of munitions and chemical/biological defense systems, including over 60 different conventional ammunition products ranging in caliber from 40 millimeters to 175 millimeters. Pine Bluff also produces munitions containing payloads for smoke, nonlethal, riot control, incendiary, illumination, and infrared uses.
- Rock Island Arsenal, Illinois manufactures weapons and weapon components, including the M119A2 howitzer, artillery, gun mounts, recoil mechanisms, small arms, aircraft weapon subsystems, and weapon simulators. Rock Island also manufactures mobile maintenance systems, and has the nation's only remaining Army foundry.
- Watervliet Arsenal, New York is the Army's only cannon manufacturer and produces armaments, mortars, cannons, and recoilless rifles. It has the nation's only large bore cannon production facility and maintains proprietary processes for heat treating and rotary forging.

The National Defense Authorization Act for Fiscal Year 2001, which first authorized ASPI, includes 11 purposes for the ASPI program as shown in Table 1; however, there is no requirement for the manufacturing arsenals to address each ASPI purpose, nor does the authority prioritize the purposes. The authorization for the ASPI program currently extends through fiscal year 2010.

**Table 1: The 11 Purposes of the ASPI Program**

1	To provide for the utilization of the existing skilled workforce at the Army manufacturing arsenals by commercial firms.
2	To provide for the reemployment and retraining of skilled workers who, as a result of declining workload and reduced Army spending on arsenal production requirements at these Army arsenals, are idled or underemployed.
3	To encourage commercial firms, to the maximum extent practicable, to use these Army arsenals for commercial purposes.
4	To increase the opportunities for small businesses (including socially and economically disadvantaged small business concerns and new small businesses) to use these Army arsenals for those purposes.
5	To maintain in the United States a work force having the skills in manufacturing processes that are necessary to meet industrial emergency planned requirements for national security purposes.
6	To demonstrate innovative business practices, to support Department of Defense acquisition reform, and to serve as both a model and a laboratory for future defense conversion initiatives of the Department of Defense.
7	To the maximum extent practicable, to allow the operation of these Army arsenals to be rapidly responsive to the forces of free market competition.
8	To reduce or eliminate the cost of Government ownership of these Army arsenals, including the costs of operations and maintenance, the costs of environmental remediation, and other costs.
9	To reduce the cost of products of the Department of Defense produced at these Army arsenals.
10	To leverage private investment at these Army arsenals through long-term facility use contracts, property management contracts, leases, or other agreements that support and advance the demonstration program for the following activities: (A) Recapitalization of plant and equipment; (B) Environmental remediation; (C) Promotion of commercial business ventures; and (D) Other activities approved by the Secretary of the Army.
11	To foster cooperation between the Department of the Army, property managers, commercial interests, and State and local agencies in the implementation of sustainable development strategies and investment in these Army arsenals.

Source: Pub.L. No. 106-398, § 343 (2001).

The Army has contracted with local non-profit economic development organizations to serve as site managers to market the arsenals' underutilized space to commercial firms. The site manager for Watervliet is the Arsenal Business and Technology Partnership of Watervliet, New York. The ASPI site manager for Rock Island Arsenal is the Rock Island Arsenal Development Group, of Rock Island, Illinois. Pine Bluff has had limited participation in the ASPI program and currently does not have a site manager.

In comments to a draft of our report, the Watervliet site manager commented that there is no evidence that the two initial statutory purposes were given priority by the drafters of the program when the ASPI legislation was developed in 2000. Additionally, the site manager commented that there is repeated and consistent evidence that the Army, at every level, considered program performance and emphasized the commercial use of underused facilities as the most important program priority. However, according to the Army's 2007 report on ASPI to the congressional defense committees, the Army views the primary goal of the ASPI program as attracting commercial entities to help the arsenals maintain their critical manufacturing capabilities and reduce manufacturing costs. Furthermore, as stated above, the conferees on the National Defense Authorization Act for Fiscal Year 2008

have expressed an expectation that DOD should show progress in the selection and execution of projects that enhance the arsenals' core missions and related workforce skills and result in contributions to the recapitalization of plants and equipment in the additional two years of ASPI authorization provided by that statute.

When ASPI was initially implemented, it was managed by the Joint Munitions Command, a major subordinate command under the Army Materiel Command.<sup>10</sup> ASPI was established with authorities similar to the Armament Retooling and Manufacturing Support initiative created by Congress in 1992, which is also managed by the Joint Munitions Command. Under this initiative, government-owned, contractor-operated Army ammunition plants and depots are authorized to lease their facilities to private sector firms to help offset the government's cost of ownership of those facilities while maintaining a workforce readiness capability and fostering cooperation with state and local interests for development. Unlike ASPI, the Armament Retooling and Manufacturing Support initiative is funded in the Army's annual budget requests.

Congress has funded the ASPI program through congressionally directed funds within the annual appropriation for Army procurement of Weapons and Tracked Combat Vehicles. Nearly all of the ASPI funds are used to renovate underutilized space at the arsenals to attract potential commercial tenants. In some cases these renovations can be extensive because some facilities have been unused for many years and have deteriorated over time. In the earlier years of ASPI, the ASPI program manager distributed these funds among the three arsenals based on the priority the program manager gave to approved projects. However, according to the ASPI program manager, since late 2005 the congressionally directed funds have been specifically designated for Rock Island and Watervliet prior to receipt by the Army. The ASPI program manager also stated that this change in the funding process severely limited the authority of the program management office to select the projects it believed would provide the most benefit to the Army, and, as a result, Pine Bluff Arsenal no longer receives funding for ASPI projects due to this predetermination. Table 2 shows the amount of congressionally directed funds the ASPI program received and the amounts obligated<sup>11</sup> from fiscal year 2002 through July 2009.

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<sup>10</sup> In 2005, the management of ASPI transferred to the TACOM Life Cycle Management Command, another Army Materiel Command major subordinate command.

<sup>11</sup> Obligations are incurred through actions such as orders placed, contracts awarded, services received, or similar transactions. Obligations incurred during a given fiscal year may require payments during the same or a future year.



**Table 2: Congressionally Directed Funds Appropriated and Obligated to Support ASPI from Fiscal Year 2002 through July 2009 (in millions)**

Fiscal year	Appropriated funding	Amount obligated as of July 2009
2002	\$3.24	\$3.24
2003	4.20	4.19
2004	3.45	3.45
2005	10.93	10.93
2006	8.50	8.50
2007	8.85	8.85
2008	21.10	20.38
2009 <sup>a</sup>	13.46	4.37
<b>Totals:</b>	<b>\$73.73</b>	<b>\$63.91</b>

Source: GAO analysis of Army data.

<sup>a</sup>The total obligated amount shown is as of July 31, 2009, and thus does not reflect any additional obligations that may have occurred during the remainder of fiscal year 2009.

Additionally, the ASPI site managers have received some funds from other sources in support of the ASPI program. For example, the Rock Island Development Group received \$200,000 each from the State of Illinois and the State of Iowa; and the Arsenal Business and Technology Partnership received approximately \$26 million from State of New York and private grant funding.

In commenting on a draft of the Army’s 2007 report to the congressional defense committees assessing implementation of ASPI, Army Headquarters stated that it did not support permanent funding for ASPI in its budget, citing concerns that ASPI had not reduced the cost of manufactured products and that available funds could be better used for other higher priority modularity and modernization programs. Nonetheless, the Army, in its final report, recommended that Congress consider establishing ASPI as a permanent program. As noted previously, the Congressional Budget Office was directed by the conference report accompanying the National Defense Authorization Act for Fiscal Year 2008 to conduct a business case analysis that examines the cost, return on investment, and economic impact of the ASPI program and expects to issue its report later this year.

**Although the Army Has Addressed the Purposes of ASPI, It Has Not Clearly Established Its Highest Priorities or Developed a Strategy That Includes Performance Goals, and Its Ability to Measure Progress Is Limited**

Arsenal Tenants Address All but One of the Purposes of the ASPI Program, but the Arsenals Have Had Limited Success in Securing Tenants That Enhance Their Core Manufacturing Missions and Related Workforce Skills

The Army's three manufacturing arsenals have secured tenants that collectively address all but one of the purposes of the ASPI authority. According to the ASPI program manager, the remaining purpose to allow the operation of Army manufacturing arsenals to be rapidly responsive to the forces of free market competition is addressed by the site managers. Since the inception of the ASPI program, the site managers have secured contracts with 59 ASPI tenants. As of July 31, 2009, according to the Army, the ASPI program had 44 active tenants (27 at Rock Island, 16 at Watervliet, and 1 at Pine Bluff).<sup>12</sup> The ASPI site managers have taken action to market this program and secure ASPI contracts with companies that address at least one of the purposes identified in the ASPI authority. Table 3 identifies the number of ASPI tenants at each arsenal addressing each of the ASPI purposes. Enclosure 1 identifies the 44 current tenants and provides the ASPI program manager's assessment of all tenants against the 11 ASPI purposes.

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<sup>12</sup> The 44 tenants we have identified do not include the site managers at Rock Island and Watervliet.

**Table 3: Number of ASPI Tenants at Each Arsenal Addressing Each of the ASPI Purposes (by Arsenal)**

	ASPI purposes	Number of ASPI tenants addressing each of the ASPI purposes		
		Rock Island	Watervliet	Pine Bluff
1	To provide for the utilization of the existing skilled workforce at the Army manufacturing arsenals by commercial firms.	0	1	0
2	To provide for the reemployment and retraining of skilled workers who, as a result of declining workload and reduced Army spending on arsenal production requirements at these Army arsenals, are idled or underemployed.	3	1	0
3	To encourage commercial firms, to the maximum extent practicable, to use these Army arsenals for commercial purposes.	26	15	1
4	To increase the opportunities for small businesses (including socially and economically disadvantaged small business concerns and new small businesses) to use these Army arsenals for those purposes.	0	1	1
5	To maintain in the United States a work force having the skills in manufacturing processes that are necessary to meet industrial emergency planned requirements for national security purposes.	1	1	0
6	To demonstrate innovative business practices, to support Department of Defense acquisition reform, and to serve as both a model and a laboratory for future defense conversion initiatives of the Department of Defense.	5	11	1
7	To the maximum extent practicable, to allow the operation of these Army arsenals to be rapidly responsive to the forces of free market competition.	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>
8	To reduce or eliminate the cost of government ownership of these Army arsenals, including the costs of operations and maintenance, the costs of environmental remediation, and other costs.	27	16	1
9	To reduce the cost of products of the Department of Defense produced at these Army arsenals.	27	16	1
10	To leverage private investment at these Army arsenals through long-term facility use contracts, property management contracts, leases, or other agreements that support and advance the demonstration program for the following activities: (A) recapitalization of plant and equipment; (B) environmental remediation; (C) promotion of commercial business ventures; and (D) other activities approved by the Secretary of the Army.	1	3	0
11	To foster cooperation between the Department of the Army, property managers, commercial interests, and state and local agencies in the implementation of sustainable development strategies and investment in these Army arsenals.	6	10	1

Source: GAO analysis of Army data.

<sup>a</sup> According to the ASPI program manager, only the site managers address purpose number 7, and they indirectly address each of the remaining ASPI purposes. Pine Bluff does not have a site manager.

Note: A tenant may address 1 or more of the 11 ASPI purposes.

According to the ASPI program manager and the site managers for Rock Island and Watervliet, attracting commercial companies as ASPI tenants has assisted in the economic development of surrounding communities by providing employment

opportunities. For example, AmCad Digital Conversion, a commercial Rock Island tenant that specializes in the preservation and conversion of public records, employs nearly 200 people from the surrounding Rock Island region. Additionally, Watervliet tenants Extreme Molding and Solid Sealing Technologies manufacture lightweight composite materials for medical equipment and commercial use, respectively, and employ approximately 40 people combined. Other Watervliet tenants, M&W Zander and VISTEC Lithography, are high-tech engineering and manufacturing companies that together employ almost 60 people in the Albany, New York area. In June 2009 VISTEC Lithography, which manufactures semiconductors and microchip nanotechnology, sold its first advanced electron beam lithography tool that was fully constructed at its Watervliet facility to the U.S. Army Research Laboratory in Maryland for advanced research and development of military devices and applications that will help enhance our national security.

However, the arsenals have had limited success in securing ASPI tenants that enhance the arsenals' core manufacturing missions and related workforce skills. Although each of the Army's 44 tenants are generating revenue for the arsenals, the Army has determined that only 4 of these tenants address the purposes that enhance the arsenals' core missions or related workforce skills. As such, ASPI site managers have been more successful at securing commercial tenants needing administrative office space, which tends to be more profitable, than they have been in leasing manufacturing space. For example, at Rock Island, for fiscal year 2008, the rate charged for administrative space was \$9.50 per square foot, whereas the rate charged for manufacturing space was \$4.00 per square foot. According to the Rock Island and Watervliet site managers who are responsible for marketing the ASPI program, the reduced profits received from charging lower rental rates to manufacturing-related companies is one of the reasons why they have focused on recruiting commercial companies in need of administrative space. Additionally, prior to the conferees on the National Defense Authorization Act for Fiscal Year 2008 voicing concerns regarding the small number of ASPI tenants supporting the arsenals' core manufacturing missions or workforce skills, these officials thought that their strategy made good business sense because they were generating revenue from their tenants and were still addressing the purposes of the program. Furthermore, the site managers told us that the recent economic slowdown has caused a decline in the growth of many companies in the manufacturing industry, which has made it more difficult for them to attract such companies to participate in the ASPI program.

Although Rock Island had three ASPI tenants that supported its core manufacturing mission and had recently signed notices of intent with two additional firms that are expected to enhance the core mission and workforce skills at the arsenal, all but one of the tenants at Watervliet were engaged in businesses that were unrelated to that arsenal's core manufacturing mission. Pine Bluff only has one ASPI tenant and this tenant indirectly supports the mission of the arsenal.

## Rock Island Arsenal

Rock Island Arsenal had 27 ASPI tenants at the time of our review, but only 3 of those tenants support its core mission. For example, 2 of the tenants provide training to the Rock Island workforce and another tenant is expected to provide high-tech services to Rock Island. During the course of this review, we found that during the early years of the ASPI program, the leadership of the Rock Island-Joint Manufacturing and Technology Center, which has responsibility for the manufacturing mission on the arsenal, was concerned that potential ASPI manufacturing tenants might compete with, rather than complement, the arsenal's core manufacturing mission. Hence, the Rock Island site manager was encouraged not to pursue potential manufacturing tenants and no manufacturing space was made available to lease to potential tenants. However, the current Rock Island Joint Manufacturing and Technology Center leadership is working closely with the Rock Island ASPI site manager to increase efforts to recruit tenants that could help enhance its core manufacturing mission or the manufacturing skills of the arsenal workforce.

The Rock Island site manager, in conjunction with the Rock Island-Joint Manufacturing and Technology Center, recently signed notices of intent under the ASPI program to lease space to two additional firms that are expected to enhance the core mission and workforce skills at the arsenal. In February 2009, Rock Island signed a notice of intent to partner with British Aerospace and Engineering Systems—a global company engaged in the development, delivery, and support of advanced defense, security, and aerospace systems—to establish a manufacturing center for consolidation of composite armor, which according to arsenal officials could lead to a new line of business for them. Under this public-private partnership agreement, the company would be expected to provide the technical and management oversight of the work, using approximately four to six of its own employees, and the Rock Island-Joint Manufacturing and Technology Center plans to provide available space and infrastructure, in addition to purchasing an autoclave and/or press system to perform the consolidation process. The Rock Island-Joint Manufacturing and Technology Center also plans to provide the skilled labor required to operate the autoclave and/or press system, handle raw materials, and perform other manufacturing needs. Also, in August 2008, the Rock Island-Joint Manufacturing and Technology Center signed a notice of intent to partner with the Quad Cities Manufacturing Laboratory, an Illinois-based manufacturing firm, to develop titanium and composite manufacturing capabilities. Under this partnership agreement, the Quad Cities Manufacturing Laboratory is expected to provide overall project management and engineering services and the Rock Island-Joint Manufacturing and Technology Center would provide skilled workers for the project, including laser cutting, casting, machining, and welding; and engineering, prototype, and testing support. Although ASPI funds were being used to renovate the space needed to accommodate these two new manufacturing tenants, during the time of this review, Rock Island was still in the process of finalizing the contracts with these ASPI tenants.

## Watervliet Arsenal

At the time of our review, Watervliet had 16 ASPI tenants under contract; however, Hartchrom, Inc., which conducts chrome plating and surface finishing for two types of cannons manufactured at Watervliet, was the ASPI program's only tenant that addressed the first purpose of the ASPI authority—to provide for the utilization of the existing skilled workforce. However, after the retirement of these former Watervliet employees that were hired by Hartchrom, the company has not employed any additional Watervliet personnel to supplement its workforce. Additionally, at the time of our review Hartchrom was negotiating with the ASPI site manager to expand the company's operations to another building on the arsenal where it plans to build a new metal processing facility that will recondition large texture die plates on a production line basis for one of its commercial partners. Hartchrom also asked Watervliet to work with them on the installation of a chrome plating facility at the arsenal. Under Hartchrom's proposal, their company would provide the conceptual drawings, conduct design reviews and final approval of all drawings, provide documentation and software, and handle all procurements and contracts for services. Watervliet would complete the design work suitable for the manufacturing of the various items and the subsequent installation as well as provide project management and manufacturing support. However, according to a Watervliet official, the arsenal was not in a position to perform design or manufacturing labor for the new facility due to the overall increase in Watervliet's workload and lack of people resources to support Hartchrom. In addition, the Watervliet site manager was also considering a proposal from another current ASPI tenant, M&W Zander, Inc., to expand its operations in the same space that Hartchrom was seeking. M&W Zander, Inc. is an architecture, engineering, and construction firm for high-tech companies, such as VISTEC Lithography. According to the Watervliet site manager, it is not uncommon for tenants to compete over the limited space at the arsenal and consideration is given to the overall benefit the Army and the arsenal will receive. Furthermore, the site manager stated that there is space available within the building for the expanded services of both ASPI tenants. Nevertheless, although the current and previous Watervliet Commanders believe that these high-tech ASPI tenants may offer some long-term benefits to the Army, they have expressed their concerns to the Watervliet site manager about the need to focus more on securing tenants that complement the arsenal's manufacturing mission.

## Pine Bluff Arsenal

Since the inception of ASPI in 2001, Pine Bluff Arsenal has secured one ASPI tenant. This tenant addresses six of the ASPI purposes. The tenant, Lindsey and Osborne, is a railroad and train company that specializes in managing box cars. Under its agreement with Pine Bluff, Lindsey and Osborne stores its trains and boxcars on the arsenal in exchange for repairing the railroad tracks leading into and out of the

arsenal. Although the service provided by Lindsey and Osborne does not directly address any of the ASPI purposes related to enhancing the arsenal's core manufacturing mission or workforce skills, Pine Bluff officials told us that this tenant indirectly supports the core mission because, once Pine Bluff's railroad tracks are usable, the arsenal will be able to use trains to ship its products if other methods of transportation were unavailable. Pine Bluff officials also told us that they only pursue companies that would complement the arsenal's core mission and would not recruit companies for the sole purpose of receiving rent for underutilized facilities. Additionally, according to Pine Bluff officials, their participation in the ASPI program is limited because they have few underutilized facilities, if any, that are suitable for commercial tenants.

The Army Has Not Determined Its Highest Priorities for ASPI or Developed a Strategy That Includes Performance Goals, and Its Ability to Measure Progress Is Limited

Although the tenants that have been secured for the ASPI program have generated revenue for the arsenals, program and site managers have generally been free to implement the ASPI program using varied approaches because the Army Materiel Command has provided only limited guidance that does not clearly articulate the Army's priorities for the program or performance goals and measures. In response to congressional committee and staff direction, the Army Materiel Command directed the ASPI program manager to give greater weight to the law's first 2 purposes--utilizing the existing skilled workforce and reemploying or retraining skilled workers—in the selection process for acquiring new tenants to occupy underutilized space. Rock Island and Watervliet site managers stated that the surge in the arsenals' workload requirements to meet the demands of existing wartime conditions may have decreased the immediate need for the implementation of the first 2 purposes of the ASPI authority. However, to the extent that the Army can use the ASPI program to attract tenants that have the capability to utilize the arsenal's existing skilled workforce, it may help in alleviating the arsenals' past experiences of significant reductions in workload and retention of critical skills when overseas military operations begin to decline. Partnering with such tenants could also help provide long-term stability to a critical component of DOD's war fighting capability. Furthermore, this strategy would be aligned with the congressional defense committees expressed expectation that DOD show progress in the selection and execution of projects that enhance the arsenals' core missions and related workforce skills.

According to the Watervliet's site manager, Watervliet often does not have resources available for added private sector opportunities, as was the case with the proposed partnership with Hartchrom to conduct the design work and manufacturing labor for the installation of a new chrome plating facility in support on one of Hartchrom's commercial partners. Nevertheless, the Army has missed an opportunity to ensure that the execution of the ASPI program is aligned with its own priorities, given the discretion afforded by the ASPI authority. The ASPI authority does not prioritize its 11 purposes, and it does not require that arsenal tenants—individually or

collectively—address all 11 purposes identified in the authority. Neither does the authority preclude the Army from issuing implementing guidance identifying its own priorities for the program. Our work on high-performing organizations has indicated that successful programs should articulate a clear mission and communicate that mission to their stakeholders as a way of encouraging higher performance.<sup>13</sup> For example, if the Army wishes to encourage program managers to recruit more tenants that enhance the arsenals’ core mission and workforce skills, it could place a higher priority on the related ASPI purposes. Furthermore, although the program and site managers have acted within the law to attract tenants that address the ASPI purposes and have generated revenue through leases with these tenants, the Army has not developed an overall strategy that includes the steps needed to achieve its desired results or ways to measure progress. In our prior work on national strategies we have determined that establishing priorities is only part of a process that, to be effective, should be integrated into an overall strategy.<sup>14</sup> Our work on results-oriented management has further shown that an effective strategy should describe the general methods an agency plans to use to accomplish its broad goals.<sup>15</sup> It should also be flexible and adaptable, allowing agencies to respond to factors beyond their control that could affect their ability to achieve desired results. Although the ASPI program has helped to defray some of the operating costs for the arsenals and has provided some economic benefits to local communities, until the Army distinguishes its highest priorities from among the ASPI purposes—as part of an overall strategy that encourages site managers to focus on the Army’s priorities while maintaining the flexibility to address subsequent priorities in the cases where higher level priorities can not be met—the ASPI program will continue to lack clear Army direction.

In addition, strategies should include performance goals that address what the strategy is trying to achieve and performance measures to gauge results.<sup>16</sup> While the Army has adopted the 11 ASPI purposes as its broad goals for the program, the ASPI purposes are not easily measurable in a way that would enable the Army to measure how effective the program has been at ensuring that its priorities are being met. Performance goals, which are derived from broad goals like the ASPI purposes, establish intended performance and focus on quantifiable results. Performance goals should be accompanied by results-oriented performance measures that provide a specific means of gauging performance. Performance measures should include a baseline and a target; should be objective, measurable, and quantifiable; and should include a time frame. However, the Army’s ability to measure program performance is limited because it has yet to develop these tools for the ASPI program. Moreover,

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<sup>13</sup> GAO, *High-Performing Organizations: Metrics, Means, and Mechanisms for Achieving High-Performance in the 21<sup>st</sup> Century Public Management Environment*, [GAO-04-343SP](#) (Washington, D.C.: February 2004).

<sup>14</sup> GAO, *Combating Terrorism: Evaluation of Selected Characteristics in National Strategies Related to Terrorism*, [GAO-04-408T](#) (Washington, D.C.: Feb. 3, 2004).

<sup>15</sup> [GAO-05-70](#).

<sup>16</sup> [GAO-05-70](#).



the conferees on the National Defense Authorization Act for Fiscal Year 2008 expressed their expectations for ASPI implementation by stating that the Army should show progress in selecting tenants that enhance the arsenals' core missions and related workforce skills and contribute to the recapitalization of plants and equipment. The Army has established two metrics to evaluate the ASPI program, including the number of ASPI contracts secured and cost savings or cost avoidance to the Army. However, these limited metrics do not measure the extent to which the program is making progress toward achieving the broad goals represented by the purposes established in the ASPI authority. Together, performance goals and performance measures can assist DOD and Congress to measure progress and determine whether programs are achieving their desired results. Without performance goals for the ASPI program and outcome-focused performance measures with which the Army can conduct a comprehensive assessment of the program's progress, ASPI program and site managers are likely to continue to face difficulties balancing competing priorities, and the Army may be unable to demonstrate that the program is moving toward addressing congressional expectations.

## **Conclusions**

If the Army views its manufacturing arsenals, along with their core manufacturing missions and workforce skills, as vital to its ability to respond when needed to national defense contingencies or other emergencies, it is important that the Army articulate its priorities for the ASPI program. Although it may be important to allow some flexibility in how site managers implement the program, until the Army establishes clear overall priorities for the program, instead of continuing to allow implementation of ASPI to vary depending upon the incentives and desired outcomes of local leadership and site managers, the arsenals may continue to attract tenants who do not support their core manufacturing missions. Furthermore, until the Army establishes quantifiable goals and outcome-focused performance measures with which to assess progress toward addressing the ASPI purposes, the Army's ability to track progress toward achieving broad goals such as utilizing the arsenals' existing skilled workforce and reemploying and retraining skilled workers will be limited. Moreover, improved Army management of the ASPI program's performance will assist Congress to make informed decisions regarding reauthorization and funding of the ASPI program.

## **Recommendations**

In order to improve the execution of the ASPI authority and ensure that the program addresses the goals of both the Army and Congress, we recommend that the Secretary of the Army direct the Commanding General of the Army Materiel Command to

- distinguish the Army's highest priorities from among the ASPI purposes as part of an overall strategy to achieve its desired results, while maintaining the flexibility

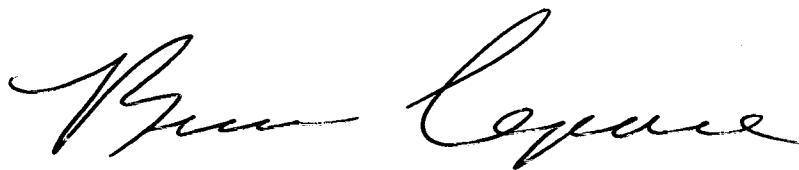
- to address lower-level priorities in cases where the highest-level priorities can not be met due to external factors;
- establish performance goals for the ASPI program; and
  - establish outcome-focused performance measures to assess the progress the Army has made toward addressing the ASPI purposes, including securing tenants that could utilize any existing skilled workforce and provide for the reemployment and retraining of skilled manufacturing workers.

### **Agency Comments and Third Party Views**

We provided DOD with a draft of this report for comment on September 1, 2009, but received no comments. We also provided the draft report to the ASPI site managers for the Rock Island and Watervliet arsenals and incorporated their comments as appropriate into this report.

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We are sending copies of this report to other congressional committees, members, and other interested parties. We are also sending copies to the Secretaries of Defense and the Army as well as the Director, Office of Management and Budget. Copies will be made available to others upon request. In addition, this report will be available at no charge on our Web site at <http://www.gao.gov>. If you or your staff have any questions about this report, please contact me at (202) 512- 4523 or [leporeb@gao.gov](mailto:leporeb@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in enclosure 3.



Brian J. Lepore, Director  
Defense Capabilities and Management

## Enclosure 1

**Table 4: The Army's Assessment of ASPI Tenants Against the 11 Purposes of ASPI,<sup>a</sup> as of July 31, 2009**

Tenant	Arsenal <sup>b</sup>	Number of employees	ASPI purposes fulfilled by each tenant										
			1	2	3	4	5	6	7	8	9	10	11
5-T Office Services	RIA	2			X			X		X	X		X
AKIMA Logistics	RIA	1			X					X	X		
Alliant Techsystems	RIA	1			X			X		X	X		X
AmCad <sup>®</sup>	RIA	199			X			X		X	X		
ARC Business Supply	RIA	9			X					X	X		
ARMTEC	RIA	1			X					X	X		
Black Consulting	RIA	1			X					X	X		
Black Hawk College	RIA	4		X			X			X	X		X
Booz Allen Hamilton	RIA	3			X					X	X		
Center for Economic Growth	WVA	4			X			X		X	X	X	X
Chemcept	WVA	4			X			X		X	X		X
City of Watervliet	WVA	2			X					X	X		X
CORE BTS	WVA	8			X			X		X	X		X
Day & Zimmerman	RIA	1			X					X	X		
DynCorp	RIA	1			X					X	X		
Efficiency Partners	WVA	6			X			X		X	X		X
ENSCO – ENDATAT, Inc.	WVA	5			X			X		X	X		X
Evident Technologies	WVA	4			X					X	X		
Extreme Molding, LLC	WVA	23			X	X		X		X	X		X
Flint Cliffs Manufacturing	RIA	6			X					X	X		
Genesis Health Care Group	RIA	14			X					X	X		
Hancock Management	RIA	20			X					X	X		
Hartchrom	WVA	16	X	X	X		X	X		X	X	X	X
Homeland Security Training Center	RIA	N/A		X	X			X		X	X	X	X
IITI – Iowa Illinois Taylor Inc	RIA	1			X					X	X		
Kellogg Brown and Root	RIA	2			X					X	X		
Lean Flame	WVA	1								X	X		
Lindsey & Osborne	PBA	2			X	X		X		X	X		X
M & W Zander	WVA	24			X			X		X	X		
ManTech International Corporation Corp HQ	RIA	4			X					X	X		

**Table 4: The Army's Assessment of ASPI Tenants Against the 11 Purposes of ASPI, as of July 31, 2009 (continued)**

Tenant	Arsenal <sup>a</sup>	Number of employees	ASPI purposes fulfilled by each tenant											
			1	2	3	4	5	6	7	8	9	10	11	
Modular Furniture Services	RIA	6			X						X	X		
Onsite Health	WVA	5			X						X	X		X
OSVETS	RIA	3			X						X	X		
PB Nammo	RIA	2			X						X	X		X
Pendulum Service	RIA	2			X						X	X		
RCH LLC	RIA	6		X	X			X			X	X		
Russell Construction	RIA	3			X						X	X		
SERCO	RIA	15			X						X	X		X
SIVYER Steel	RIA	4			X						X	X		
Solid Sealing Technologies	WVA	17			X			X			X	X		
Strategic Response Initiatives	WVA	2			X			X			X	X		
THOTH Solution	RIA	7			X						X	X		
TNS Payment Solutions	WVA	12			X						X	X		
VISTEC Lithography	WVA	34			X			X			X	X	X	X
<b>Arsenal site managers</b>														
Arsenal Business & Technology Partnership	WVA	4	X	X	X	X	X	X	X	X	X	X	X	X
Rock Island Arsenal Development Group	RIA	2	X	X	X	X	X	X	X	X	X	X	X	X

Source: ASPI Program Manager.

11 Purposes of the ASPI Authority (abbreviated):

1. Provide for the utilization of existing skilled work force
2. Provide for the reemployment and retraining of skilled workers
3. Encourage commercial firms to use Army manufacturing arsenals
4. Increase the opportunities for small businesses to use Army manufacturing arsenals
5. Maintain work force skills in manufacturing processes
6. Demonstrate innovative business practices, to support DOD acquisition reform, and to serve as both a model and a lab for future defense conversion initiatives of the DOD
7. Allow the operation of Army manufacturing arsenals to be rapidly responsive to the forces of free market competition
8. Reduce or eliminate cost of government ownership
9. Reduce the cost of products
10. Leverage private investment through long-term facility use contracts, property management contracts, leases or other agreements that support and advance the following activities: (A) recapitalization of plant and equipment; (B) environmental remediation; (C) promotion of commercial business ventures; and (D) other activities approved by the Secretary of the Army.
11. Foster cooperation between the Department of the Army, property managers, commercial interests and State and local agencies

## Enclosure 2

### **Additional Statutory Authorities That the Army Uses or Could Use to Help Improve the Viability of the Army's Manufacturing Arsenal**

Although our work focused on the Army's implementation of the Arsenal Support Program Initiative (ASPI) program, there are several authorities, other than ASPI, that the Army uses or could use to help improve the viability of the Army's manufacturing arsenals. These include section 4532 of Title 10 U.S. Code, commonly referred to as the Army Arsenal Act, and other statutes that authorize the establishment of public-private partnerships, including direct sales, research and development, and facilities use agreements, such as enhanced-use leases. However, some of these authorities have provisions that limit their usefulness to the manufacturing arsenals.

#### The Army Arsenal Act

Section 4532 of Title 10, commonly referred to as the Army Arsenal Act, states that the Secretary of the Army "shall have supplies needed for the Department of the Army made in factories or arsenals owned by the United States," when it is economical to do so. Under its implementing guidance for the Army Arsenal Act, when determining whether supplies can be economically obtained from government-owned facilities, the Army assesses the government's manufacturing costs and compares them to the costs of buying from the private sector—a process commonly referred to as the "make or buy" analysis. Army Regulation 700-90 provides guidance for the management of the Army industrial base for weapon system acquisition and encourages the "make or buy" analysis of the Army Arsenal Act on a case-by-case basis to determine whether to have government entities or private firms provide needed supplies. According to Rock Island Arsenal and Watervliet Arsenal officials, although the intent of the Army Arsenal Act is to make the Army manufacturing arsenals the first choice in providing Army core mission products—such as gun mounts, recoils, munitions, mortars, and cannons—it has not been effectively utilized due to a provision within an Army regulation<sup>17</sup> that encourages program managers to purchase items from the private sector.

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<sup>17</sup> According to Army Regulation 700-90, *Army Industrial Base Process* (Dec. 14, 2004), the Army will rely on the private sector for support of defense production to the maximum extent practical. Government-owned facilities may be considered essential when no commercial producer can be induced to supply needed items, to ensure continued availability of important capabilities in time of national emergency, or government-owned facilities are more efficient or economical than private industry.

## Public-Private Partnerships

According to Army Materiel Command officials, a public-private partnership is an agreement between an Army-owned and operated facility and one or more private enterprises to perform work or utilize the Army's facilities and equipment. Some partnerships have been established by contract under statutory authority and some are arrangements pursuant to memorandums of agreement or other noncontractual agreements. These partnerships can range from joint public-private undertakings to private sector participation in some aspect of DOD production to direct sales of articles or services to the private sector. Although public-private partnerships have flexible characteristics, the key element in each partnering arrangement is the use of some aspect of DOD's industrial base capability to support the partnerships.

There are a number of authorities that the Army may use to establish public-private partnerships, and any single partnership may cite more than one authority. For the manufacturing arsenals, these authorities can be divided into three categories: (1) direct sales statutes, (2) research and development statutes, and (3) facilities use statutes. According to Rock Island and Watervliet officials, they have made efforts to utilize the entire legislative and partnering toolbox available to them, where applicable. Each arsenal also reported having difficulties in developing partnerships because of limitations involving some of the authorities. Table 5 summarizes some of the principal statutory and regulatory authorities, other than ASPI, that are available to the Army's manufacturing arsenals for establishing partnering arrangements.

**Table 5: Summary of Principal Authorities, Other Than ASPI, Available to Army Manufacturing Arsenals for Establishing Partnering Arrangements**

Direct Sales Statutes – Contractual and Cooperative Agreements
<p><b>10 U.S.C. § 2208(j)</b> permits the Secretary of a military department to authorize an industrial facility financed through working capital funds to sell articles and manufacturing, remanufacturing, and engineering services outside DOD if the purchaser is fulfilling a DOD contract or subcontract and the solicitation for the contract or subcontract is open to public private competition; or if the Secretary would advance the objectives of 10 U.S.C. § 2474(b) (2) by authorizing the facility to do so. The Secretary of Defense may waive these conditions for a particular sale under certain circumstances. Under regulations prescribed in accordance with <b>10 U.S.C. § 2208(h)</b>, these articles or services may be sold to a contractor for use in performing DOD contracts.</p>
<p><b>10 U.S.C. § 2474</b> requires the Secretaries of the military departments (or the Secretary of Defense in the case of defense agencies) to designate depot-level maintenance activities (other than facilities approved for BRAC) as Centers of Industrial and Technical Excellence (CITE), permits the Secretaries to authorize and encourage public-private partnerships at CITES to provide for the performance of work related to depot-level maintenance core competencies and private sector use of facilities and equipment not fully utilized by DOD, and permits amounts received by the CITE for work performed under a public-private partnerships to be credited to the appropriation or fund that incurs the cost of performing the work.</p>

<p><b>10 U.S.C. § 4544</b> authorizes Army working-capital-funded industrial facilities to enter into a contract or other cooperative arrangement with a non-Army entity to carry out a variety of specified activities, including the sale of articles or services to persons outside the Army, the performance of work by a non-Army entity at the facility, the sharing of work, or the lease or use of the Army facilities or equipment. Cooperative arrangements cannot exceed 5 years, unless specifically authorized by law, and are subject to several conditions, including: work must be substantially performed by the government facility, must not interfere with the DOD work or military mission of the facility, and the non-Army entity must indemnify the United States from any claim for damages or injury arising out of this arrangement, except for government misconduct or gross negligence. The proceeds of sales are credited to the working capital fund that incurs work under this authority, and this authority may be used to enter into not more than eight contracts or cooperative agreements. This authority is scheduled to expire on September 30, 2014.</p>
<p><b>22 U.S.C. § 2770</b> allows the President to sell defense articles and services to a U.S. company for incorporation into end items (and for concurrent or follow-on support) to be sold by such company either on a direct commercial basis to a friendly foreign country pursuant to a specified export license or approval, or in the case of specified ammunition parts, using commercial practices which restrict actual delivery directly to a friendly foreign country or international organization under specific conditions.</p>
<p><b>Research and Development Statutes</b></p>
<p><b>10 U.S.C. § 2539b</b> authorizes the Secretary of Defense and the Secretaries of the military departments, under prescribed regulations, to sell, rent, loan, or give samples, drawings, and manufacturing or other information, or sell, rent, or loan government equipment or materials, or make available for a fee the services of any government laboratory, center, range, or other testing facility, to persons or entities, for varying purposes such as use on independent research and development projects or demonstrations to friendly foreign governments, subject to certain conditions.</p>
<p><b>10 U.S.C. § 2358</b> authorizes the Secretary of Defense and the Secretaries of the military departments to perform research and development projects related to weapons systems and other military needs, or otherwise of potential interest to DOD, by contract, cooperative agreement, or grant, or by other specified means. Additional provisions applicable to cooperative agreements are provided in <b>10 U.S.C. § 2371</b> and <b>§ 2371a</b>.</p>
<p><b>15 U.S.C. § 3710a</b> authorizes federal agencies to permit federal laboratories to enter Cooperative Research and Development Agreements (CRADAs) on behalf of the agency with various entities, consistent with the missions of the laboratory and subject to various conditions.</p>
<p><b>Facilities Use Statutes</b></p>
<p><b>10 U.S.C. § 2667</b> allows leasing of nonexcess facilities and equipment for not more than 5 years unless it is determined that a longer lease would promote the national defense or be in the public interest, in accordance with specified rules and conditions.</p>
<p><b>FAR Subpart 45.3</b> prescribes the policies and procedures for contractor use and rental of government property.</p>
<p><b>FAR Subpart 45.4</b> prescribes the rules pertaining to the title to government-furnished property and the title to contractor-acquired property. For example, under fixed price type contracts, the contractor retains title to all property acquired by the contractor for use on the contract, except for property identified as a deliverable item.</p>

Source: DOD's 2008 Annual Report on Section 4544 of Title 10, Army Cooperative Activities Statute and GAO analysis.

Note: The descriptions of these authorities are not intended to be exhaustive; rather, they describe particular aspects of the authorities pertinent to public-private partnerships at Army manufacturing arsenals.

## Use and Limitations of Direct Sales Authorities

Prior to May 2009, Rock Island and Watervliet officials reported that only under direct sales statutory authority granted by section 2208 and section 4543 of Title 10 were they permitted to utilize their capabilities and workforce to support commercial ventures that are performing work on behalf of the Army. Watervliet reported having ongoing partnerships with two defense contractors under the direct sales authority of section 4543, for the manufacture of the 120mm M256 cannon, mortar barrels, and the 81mm barrel assembly. Rock Island reported having ongoing partnerships with two

defense contractors to conduct recoil durability tests for the Stryker and gun mount work under the direct sales authority of section 4543; and two recent partnerships being formed with British Aerospace and Engineering Systems and the Quad Cities Manufacturing Laboratory that were discussed earlier in this report. According to the Rock Island and Watervliet officials, the only limitation to these statutes is that section 4543 requires them to obtain certificates of noncommercial availability before they can sell their products or services to the private sector.

According to Army officials, the fact that the direct sales authority of section 4544 does not require a certificate of noncommercial availability in order to enter into a partnership with private industry firms is a significant benefit of the statute; however, there are several provisions in this direct sales authority that limit its usefulness. Specifically, section 328 of the National Defense Authorization Act for Fiscal Year 2008 amended section 4544 of Title 10 by limiting the number of partnering agreements allowed to eight and establishing an expiration date for the authority of September 30, 2014—in addition to an already existing 5-year limit on multiyear contracts for cooperative arrangements. Because the legislation that initially authorized section 4544<sup>18</sup> did not limit the number of partnerships that could be established, the Army had a total of 11 partnerships when the fiscal year 2008 legislation was enacted. To comply with the statutory limitation of no more than eight contracts using this authority, the Army closed and suspended some contracts, converted contracts to other authorities, and issued a moratorium on creating new cooperative arrangements and partnerships under this authority. According to Rock Island and Watervliet officials, during this time period, they had partnering proposals that could not be finalized due to the limit of eight partnerships which were already dedicated to other Army industrial facilities and the Army's moratorium on new partnerships. At the time of our review, according to Army Materiel Command officials, the Command was in compliance with the limitation on the number of contracts allowed under section 4544 and was in the process of establishing a review panel to screen and recommend approval for future partnership proposals. Additionally, in the Army's Fiscal Year 2009 report to Congress on the use of the authority under section 4544, the Army reported that it would request in the Fiscal Year 2011 Legislative Change Proposal Cycle that section 4544 be made permanent, the pending expiration of September 30, 2014, be lifted, and that the limitation on the number of contract or cooperation arrangements formed under this authority be removed.

According to Rock Island and Watervliet officials, they have been limited in their use of section 2474 of Title 10 because this statute has traditionally been applied only to DOD depot-level maintenance activities. However, Pine Bluff was designated as a

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<sup>18</sup> Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, Pub. L. No. 108-375, § 353(2004).



Center of Industrial and Technical Excellence<sup>19</sup> in September 2005 for chemical and biological defense equipment and was thus authorized to form public-private partnerships under this authority. According to Pine Bluff officials, Pine Bluff subsequently entered into a public-private partnership for the rebuild of the M40 protective masks, a gas mask that protects soldiers on the battlefield from chemical and biological agents. Nonetheless, according to a senior Army Materiel Command official, Pine Bluff can not form similar partnerships for their ammunition and pyrotechnic production core competencies as they are not designated as a Center of Industrial and Technical Excellence for these competencies nor do they have documented depot-level maintenance work for these competencies.

Such designations under section 2474 could better position the arsenals to form broad-based public-private partnerships with private entities, which could increase the workload of the Army's manufacturing arsenals. Since early 2008, according to Army Materiel Command officials, there have been discussions within the Army to propose amending section 2474 to allow the organic industrial capabilities of any DOD facility, including DOD ammunition plants and arsenals, to be designated as Centers of Industrial and Technical Excellence in their core competencies, if depot-level maintenance work can be documented. To date, according to Army Materiel Command officials, the Army has not presented such a proposal to Congress for consideration but intends to do so in its Fiscal Year 2011 Legislative Change Proposal Cycle. However, in May 2009, the Secretary of the Army designated Rock Island as a Center of Industrial and Technical Excellence for the Army's Mobile Maintenance Systems, specifically the Forward Repair System and the Shop Equipment Contract Maintenance because of Rock Island-Joint Manufacturing and Technology Center's proven expertise in the overhaul of these systems. Although Rock Island's core mission capability for manufacturing weapons is not included in its Center of Industrial and Technical Excellence designation, both Army and Rock Island officials told us that they believe that this designation should allow for future partnership opportunities. Conversely, although Watervliet has performed the maintenance and overhaul of the reparable parts of some Army cannon components and is the sole manufacturer of these cannons, it has not been designated as a Center of Industrial and Technical Excellence.

### **Use of Research and Development Authorities**

Watervliet reported using the research and development statute—section 3710a of Title 15, Cooperative Research and Development Agreements—to enter into a partnership with Benet Laboratories, in support of the design, prototype, and production of new technology for the Army's cannon and howitzer guided bore technologies, and fatigue and fracture analysis. Additionally, Rock Island partnered with Benet Laboratories to manufacture five gun mounts, other recoil parts, and

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<sup>19</sup> A DOD Center of Industrial and Technical Excellence is a designation given to DOD depot-level maintenance activities by the Secretary of each military department based on the activities' core competencies. Based on section 2474 of Title 10, designated Centers of Excellence are authorized and encouraged to enter into public-private partnerships with private sector companies to perform work related to their core competencies.

perform recoil durability testing for the 120mm XM360 high performance gun assembly.

### **Use and Limitations of Facilities Use Authorities**

Watervliet has also established a partnership with Hartchrom, Inc., including a services contract under the Federal Acquisition Regulation that allows Hartchrom to utilize Watervliet plant facilities to apply chrome-plating and surface finishing to two cannon barrels manufactured by Watervliet. Additionally, Rock Island and Watervliet have utilized section 2667 of Title 10 to establish facilities use agreements with other DOD, federal, state, and private entities. Under this lease authority, the Secretaries of the military departments are generally authorized to lease nonexcess real property in exchange for cash or in-kind consideration not less than the fair market value of the lease interest whenever they consider it advantageous to the United States. In-kind consideration accepted with respect to a lease under this section can include construction of new facilities or maintenance of existing facilities. According to Rock Island and Watervliet officials, unlike ASPI, if lease agreements are established with commercial tenants under section 2667, the arsenals would need funding from the Army to renovate and configure unused space to meet the needs of any new tenants before the new tenants begin paying rent. In 2008, we reported<sup>20</sup> that the Army utilizes this statute more than any other military department to execute short-term leases, lasting no more than 5 years, as well as longer term enhanced use leases, which usually span more than 30 years and typically involve in-kind payments.<sup>21</sup>

Rock Island officials stated that, although this statute is used to establish permits with other DOD agencies, and agreements and easements with some local, state, and private entities, only the lease for the Rock Island Arsenal Golf Club is expected to be an enhanced-use agreement for real property. According to these officials, the negotiations for this property have been ongoing for more than 4 years, and they expect it will take at least another year to complete. Both Rock Island and Watervliet officials told us that they believe enhanced-use leases might not be effective in leasing space to commercial tenants who have an immediate need, due to the lengthy amount of time required to complete the enhanced-use lease process.

In May 2008, the Secretary of the Army agreed to provide 57 acres of land on the Watervliet Arsenal, divided into 7 parcels, to the community for development under an enhanced-use leasing agreement. In December 2008, the Arsenal Business and Technology Partnership was selected as the developer. According to a Watervliet official, enhanced-use leasing would require the developer to fully fund the cost of

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<sup>20</sup> GAO, *Defense Infrastructure: Services' Use of Land Use Planning Authorities*, [GAO-08-850](#) (Washington, D.C.: July 23, 2008).

<sup>21</sup> Section 2667 of Title 10 does not use the term enhanced-use lease to differentiate leases executed pursuant to this authority that are longer than 30 years and involve in-kind payments.

development and rent would be paid back to the government for use of the land. In April 2009, the Arsenal Business and Technology Partnership provided a draft of its Lease and Management Plan to the Corps of Engineers; and according to a Watervliet official, the Corps of Engineers expects to finalize the agreement for Watervliet by mid-year 2010.

Leases executed pursuant to section 2667 not only benefit the installation by leveraging underutilized land in exchange for rent money or in-kind consideration, such as new construction or maintenance of existing facilities, they also benefit the developer and the community. For example, according to DOD officials, these projects can establish long-term relationships between developers and private sector and government entities with specific real estate needs that are potential occupants of the space. In addition, developers receive market rate returns on their investments and access to new markets, such as federal government and military support contractors. These agreements benefit the community by providing additional jobs, a broader tax base, and renovation of deteriorated assets.

## **Enclosure 3**

### **GAO Contact and Staff Acknowledgments**

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