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Washington, DC 20548

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June 25, 2009

The Honorable Steny H. Hoyer  
Majority Leader  
House of Representatives

Subject: *Defense Logistics: Information on the Test and Evaluation and Assignment and Cancellation of National Stock Numbers as It Relates to MILITEC-1*

Dear Mr. Hoyer:

The purpose of this letter is to respond to your request for information regarding the test and evaluation process<sup>1</sup> conducted by the Department of Defense (DOD) of a specific synthetic lubricant called MILITEC-1 that is produced by Militec, Inc., and the assignment and cancellation of national stock numbers<sup>2</sup> (NSN) associated with that product. Militec, Inc., has challenged DOD decisions not to include MILITEC-1 in the federal supply system. Specifically, we examined (1) the extent to which the military services have tested and evaluated MILITEC-1 as a small arms lubricant, as a metal conditioner, as a general purpose lubricant, and as a lubricant additive, and with what results; and (2) the extent to which the Defense Logistics Agency (DLA) followed applicable DOD procedures in assigning and subsequently canceling national stock numbers to MILITEC-1. In addition, we are providing in enclosure I a timeline on the efforts to test and evaluate, and assign and cancel, NSNs for MILITEC-1.

MILITEC-1 is a dry, impregnated, synthetic-based metal conditioner that, at the time of our review, has been primarily marketed as a small arms<sup>3</sup> lubricant, although it is also marketed as an automotive and transportation lubricant. The product is packaged in several container sizes and is available for commercial purchase. According to DOD officials, in order for a product to be approved for use on small arms it must fulfill DOD's performance specifications by meeting a number of

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<sup>1</sup>According to DOD officials, tests and evaluations can range from a limited demonstration of performance characteristics to a comprehensive assessment of the product with regard to military specifications.

<sup>2</sup>National stock numbers serve as the labels applied to items that are repeatedly purchased, stocked, stored, issued, and used throughout the federal supply system.

<sup>3</sup>DOD defines small arms as "man-portable individual and crew served weapons systems used mainly against personnel and lightly armored or unarmored equipment."

laboratory and live fire test requirements developed by the Army, which has cognizance across DOD for the specification for cleaner, lubricant, and preservative properties in small arms lubricants. Once a product has been approved and the services have determined that they have sufficient projected demand for the product, the services request that DLA assign the product an NSN—a label assigned to items that are repeatedly purchased, stocked, stored, issued, and used throughout the federal supply system.

To obtain an understanding of the extent to which DOD and the military services have tested and evaluated MILITEC-1 as a small arms lubricant, metal conditioner, general purpose lubricant, and a lubricant additive and with what results, we obtained and reviewed available DOD instructions, manuals and publications, and test and evaluation reports on MILITEC-1 and other, similar products. We did not, however, observe testing or evaluate test results, given the considerable lapse in time since such tests had occurred. We also did not evaluate the validity of the military specifications. We met with (1) DOD officials who had knowledge of the tests and evaluations conducted, and (2) officials from Militec, Inc., to gain their perspective on their product and their experiences with DOD. To obtain an understanding of the extent to which the DLA followed applicable procedures in assigning and subsequently canceling NSNs to MILITEC-1, we obtained and reviewed applicable DOD logistics documents and met with DOD officials to discuss the procedures that were followed in assigning and canceling NSNs. We also met with officials from Militec, Inc., to learn their perspective with regard to the assigning and canceling of NSNs for their product. Additionally, we reviewed numerous testimonials they provided us from deployed servicemembers who used the product and other company documents. Enclosure II provides additional detail regarding our scope and methodology.

We conducted this performance audit from July 2008 through April 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.

## **Results in Brief**

From 1988 to 2006, the military services tested and evaluated MILITEC-1 11 times for various uses, including as a small arms cleaner, lubricant, and preservative; a metal conditioner; a general purpose lubricant; or a lubricant additive. Although the product passed early tests as a lubricant additive in the late 1980s, it did not pass 9 of the 11 tests and evaluations. These tests ranged from a limited demonstration of performance characteristics to a comprehensive assessment of the product with regard to military specifications. The product has not passed any tests and evaluations for a small arms cleaner, lubricant, and preservative, metal conditioner, or a general purpose lubricant. In 1988 and 1989, MILITEC-1 passed Marine Corps and Navy tests and evaluations as a lubricant additive, but it did not pass a subsequent test and evaluation as a lubricant additive in 1994. Militec, Inc., continues

to market its product for use as a small arms lubricant to DOD, and asserts that DOD's current product specification is flawed. The Army disagrees that its military specification is flawed and has extended to Militec, Inc., the opportunity either to demonstrate how its product has been modified to conform to the current military specification for a small arms lubricant or indicate why the specification should be modified, according to DOD officials. However, Militec, Inc., has not done so. DLA did not follow applicable DOD procedures when it assigned NSNs for MILITEC-1 in 1993 and again in 1995 in that it did not first obtain approval from the military services as required by DLA procedures, according to agency officials. However, the agency did follow applicable procedures when it subsequently canceled or blocked NSNs in 1995, 2003, and 2007, according to DLA officials and our review of available documentation. DOD officials told us that their procedures require DLA to obtain approval from the military services prior to assigning NSNs, to ensure that a product meets military specifications. The services did not approve the assignment of NSNs for MILITEC-1 in the 1990s, yet because of the department's push toward the use of commercial off-the-shelf items, the product was assigned NSNs by DLA in 1993 and did get into the supply system. Soon after, however, in 1994 DLA initiated action to cancel the NSNs because of a lack of service support. In that respect, DLA did correctly follow applicable procedures on the occasions when it either canceled the product—that is, removed it from the federal supply system—or halted its purchase throughout the 1990s and continuing to 2007, according to DLA officials.

## **Background**

### DOD Small Arms Multipurpose Lubricant Specifications Require Products to Have Cleaning, Lubrication, and Preservation Properties

In order for a product to be approved for use on small arms it must fulfill DOD's performance specifications by meeting a number of laboratory and live fire test requirements developed by the Army. The Army, which has cognizance across DOD over the specifications for cleaning, lubrication, and preservation properties in small arms lubricants, provides copies of this performance specification and other relevant information to suppliers who wish to qualify their products. The supplier usually pays the cost of qualification testing and provides samples of its product for the tests.

In 1971, to improve weapons maintenance and to simplify logistics supply, the Army sought to define a military specification for a single small arms lubrication product to be used for cleaning, lubrication, and preservation for daily user-level maintenance. At that time soldiers were using multiple products to perform routine small arms maintenance. In July 1979, after several years of testing and evaluation, DOD approved a servicewide military performance specification for a single cleaner, lubricant, and preservative product for small arms. Since then, the military specification has been modified 18 times, most recently after the desert lubricant test and evaluation was finalized in 2005 for applications in a desert environment. DLA officials explained to us that changes to military specifications may be initiated by public law, DOD policy, service policy, improved test and evaluation processes, changing user needs, or industry capability. Currently, the approved cleaning, lubrication, and preservation products are applied to more than 1 million DOD small

arms. The most current version of the requirements for the small arms lubricant specification is shown in table 1.

**Table 1: Current DOD Requirements for Small Arms Lubricant Specification**

Laboratory tests				Live fire tests
Cleaning	Lubrication	Preservation	Other	
Residue removal	Friction and wear-control in sliding contact conditions	Humidity and salt-spray resistance	Viscosity	Cold temperature firing
			Flash point 150°F minimum	
			Pour point -75°F maximum	
		Corrosion protection	Metal corrosion protection	Dynamic dust test
			Water displacement	Salt fog exposure
			Fluidity at low temperature -65°F	
			No interference with chemical agent detectors	
			No ozone depleting substances	
			User safety and toxicity	

Source: GAO and DOD data.

When a product has been tested and evaluated and has met all the performance requirements, the Army will list the product and its supplier on a qualified products list.<sup>4</sup> According to DLA officials, the DLA executes all DOD and other government purchases throughout the federal supply system for products with cleaning, lubrication, and preservation properties. Only qualified suppliers are eligible for government solicitations for such products. Multiple commercial formulations for cleaning, lubrication, and preservation products have been placed on the qualified products list and are available for purchase by the services and other organizations in the U.S. government and friendly foreign countries.

### National Stock Numbers Are the Labels of the Federal Supply System

NSNs serve as the labels assigned to items that are repeatedly purchased, stocked, stored, issued, and used throughout the federal supply system. The NSN is officially

<sup>4</sup>Pursuant to section 2451 of Title 10 of the U.S.Code, the Secretary of Defense is required to develop a single catalog system and related program of standardizing supplies for the Department of Defense.

recognized by the United States government, including DOD, the North Atlantic Treaty Organization (NATO), and certain foreign governments around the world. NSNs are catalogued in the Federal Logistics Information System, which is managed by the Defense Logistics Information Service, a DLA Command. The Federal Logistics Information System contains over 7 million NSNs.

NSNs are 13-digit codes of which the first 4 digits represent the Federal Supply Class, a grouping of similar items. For example, engine oil, small arms oil, rifle grease, and automotive grease are cataloged into one Federal Supply Class—Oils and Greases (Federal Supply Class 9150). The next two digits signify the country that assigned the NSN. For example, the United States is identified by 00 and 01. The last seven digits represent the national item identification number and are sequentially assigned to make each NSN unique. When items from different manufacturers perform the same function, have the same characteristics, and are the same size, a single NSN is assigned to minimize the number of NSNs in the Federal Logistics Information System. Figure 1 shows the structure of an NSN and its component parts for a notional lubricant made in the United States.

**Figure 1: Example of an NSN for a Notional Lubricant**

9150-01-1234567		
9150	01	1234567
Federal Supply Class	Country of origin	Unique number

Source: GAO and DOD data.

National Stock Numbers Are Assigned and Canceled by DLA at the Request of the Military Services

DOD procedures call for the DLA to obtain approval from the military services prior to assigning NSNs to ensure that a product meets established military specifications or requirements. According to DOD officials, DOD has no single regulation for either assigning or canceling an NSN; although it has an established system for assigning, it does not have a comparable system for canceling an NSN.<sup>5</sup>

<sup>5</sup>During our review we were guided by DOD officials to several DOD publications that contain information on the procedures for assigning and canceling an NSN. These publications include DOD 4100.38-M, Department of Defense Provisioning and Other Procurement Screening Manual, Nov. 1983; DOD 4100.39-M, Federal Logistics Information System, FLIS Procedures Manual, Volumes 1-16, (date varies by volume); DOD 4140.26-M, Defense Integrated Materiel Management Manual for Consumable Items, May 1997; DOD 4140.1-R, DOD Supply Chain Materiel Management Regulation, May 2003; DOD 4140.32-M, and the Defense Inactive Item Program, August 1992.

Within DOD, requests for DOD to assign NSNs are made by the services' engineering support activities to the appropriate DLA supply center, depending on the particular Federal Supply Class item. According to DOD officials, in most cases requests are made after the services test the products. For example, a request for an NSN for a small arms lubricant for the Army would be made by the Army's Research Development and Engineering Command to the Defense Supply Center Richmond, the supply center that is responsible for the Federal Supply Class Oils and Greases: Cutting, Lubricating and Hydraulic (Federal Supply Code 9150), which includes small arms lubricants. In their requests the engineering support activities provide technical data, quantities, packaging requirements, possible suppliers, special handling and storage requirements, and shelf life, among other logistics data, to enable the DLA supply center to procure the item (usually competitively, according to DLA officials) and provide proper logistical support throughout its life cycle.

The DLA supply center forwards the NSN request and associated technical information to the Defense Logistics Information System, which reviews the request to ensure that it is complete and accurate data and then searches the roster of existing NSNs to prevent duplications. According to DLA officials, the Defense Logistics Information System assigns the NSN and catalogs the item using the information provided by the DLA supply center. The supply center notifies the service engineering support activity of the NSN assignment. Prior to 1996, supply centers had the authority to assign NSNs, but now only the Defense Information Logistics System has this authority.

DOD procedures call for DLA to cancel an NSN when an engineering support activity requests that it does so. DLA officials told us when there are multiple registered users, DLA will coordinate with all of them to determine whether they want to continue using the product. If a NATO country is listed as a user, DLA must also coordinate with NATO on the proposed NSN cancellation. DLA will cancel an NSN only when all users inform DLA that they wish to discontinue use of the product.

In some cases DLA blocks, rather than cancels, an NSN—that is, it prevents DOD users from purchasing an NSN-assigned item through the federal supply system. For example, according to DLA officials, if an item meets the needs of a civilian user but does not meet military specifications, it retains its NSN listing but is specifically blocked from purchase by DOD users. Such specific blocks require concurrence from the engineering support activity with oversight for the particular item.

### **MILITEC-1 Did Not Pass Most Tests and Evaluations for Various Uses**

The military services have tested and evaluated MILITEC-1 11 times for various uses, including as a small arms cleaner, lubricant, and preservative; a metal conditioner; a

general purpose lubricant; and a lubricant additive. These tests ranged from a limited demonstration of performance characteristics to a comprehensive assessment of the product with regard to military specifications. Although the product passed 2 early tests, it did not pass 9 of the 11 tests and evaluations. MILITEC-1 did not pass any tests and evaluations for use as a small arms cleaner, lubricant, and preservative, nor did it pass any tests and evaluations as a metal conditioner or a general purpose lubricant. The product exhibited some positive attributes in two early Navy and Marine Corps tests and evaluations for use as a lubricant additive, but it did not pass a subsequent test and evaluation for use as a lubricant additive. Ultimately, according to DOD officials, MILITEC-1 has not met DOD specifications.<sup>6</sup>

#### MILITEC-1 Did Not Pass Any Tests and Evaluations as a Small Arms Cleaner, Lubricant, and Preservative

The initial assessment of MILITEC-1 as a small arms lubricant began in April 1990, when DOD asked the Army to test and evaluate MILITEC-1 against the cleaning, lubrication, and preservation military specification. The Army performed a test and evaluation of MILITEC-1 in July 1990 and concluded that MILITEC-1 did not meet military specifications and could not qualify to become an approved product. Specifically, the Army determined that MILITEC-1 did not have a cleaning component and did not meet the cold temperature requirements. According to Army test and evaluation documentation, the Army noted that MILITEC-1 would need to be reformulated before it could meet the military specifications for a small arms lubricant.

In April 1991, the Navy conducted a live fire study to test and evaluate eight commercial gun lubricants for their ability to increase the velocity and accuracy of the M-16A1 rifle. These lubricants included MILITEC-1 as well as DOD's approved cleaning, lubrication, and preservation product. The study found that the advantages in velocity and accuracy claimed by Militec, Inc., were not achieved. The study also found that MILITEC-1 posed a possible health hazard following both acute and chronic overexposure to the skin, and it noted that the product should not be recommended for use.

In July 1992, the Navy conducted a test and evaluation to determine which small arms lubricants would perform best in environments of airborne dust and fine sand, high temperature, and corrosive airborne salts. The Navy tested and evaluated 14 commercial small arms lubricants, including MILITEC-1, in these environments. The Navy found in the dust tests with various exposure times that although liquid lubricants appeared to accumulate more dust than the dry lubricants, they were actually more effective in overcoming the friction caused by the dust. In addition, the test and evaluation showed that only the currently approved cleaning, lubrication, and preservation product and one other tested and evaluated lubricant provided

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<sup>6</sup>We note that some government agencies (for example, U.S. Park Service, Secret Service, and the Police Department of the U.S. Supreme Court) purchase MILITEC-1, but according to DOD officials, DOD's product specifications for military users are based on its broader needs for a product that performs in diverse operational conditions and climates.

adequate corrosion protection. The rest of the lubricants, including MILITEC-1, did not perform satisfactorily in this area. Therefore, the Navy concluded that none of the lubricants provided significant benefits over the approved cleaning, lubrication, and preservation product, which it found to be adequate for general use in these environments.

After receiving numerous testimonials on the efficacy of MILITEC-1 from servicemembers in Iraq who had been using it as a small arms lubricant,<sup>7</sup> the Army Materiel Command in October 2003 decided to conduct another test and evaluation of small arms lubricants (referred to in this report as the desert lubricant test and evaluation).<sup>8</sup> Concerned about the perception of bias at the testing location for small arms lubricants,<sup>9</sup> the Army Materiel Command decided to conduct the test and evaluation at another Army test facility. In addition, the Army focused its test and evaluation on the small arms lubrication properties of the military specification in a desert environment and issued a solicitation to industry. Twenty-three products, including MILITEC-1, along with the 2 qualified cleaning, lubrication, and preservation products, were submitted for test and evaluation. The effort included live fire testing and used the three most frequently issued types of small arms. Final test and evaluation results were not determined until October 2005 for a variety of reasons—for example, test protocols had to be developed and coordinated with industry, and small arms for test and evaluation had to be obtained. Field testing with soldiers was considered but not performed because of concerns about test repeatability and soldiers' respiratory safety in a highly concentrated silica dust environment. MILITEC-1, along with 15 other products, did not pass the initial live fire test because of excessive firing malfunctions and was therefore not considered for further live fire testing. In response to the test and evaluation results, the Army issued a safety and maintenance message to all Army components in December 2006 emphasizing that only the approved cleaning, lubrication, and preservation products should be used on small arms, and that small arms reliability could be compromised if other products were used.<sup>10</sup> In January 2006, the Army notified DLA that based on the results of the desert lubricant test and evaluation, it would not further consider MILITEC-1 as a small arms lubricant.

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<sup>7</sup>Servicemembers obtained MILITEC-1 at various times by purchases made through the national stock system, by servicemembers' obtaining the product for themselves, and by Militec, Inc.'s providing the product to servicemembers free of charge.

<sup>8</sup>Army Research Laboratory, *Evaluation of Small-Arms Weapons Lubricants in Desert Environments* (Aberdeen Proving Ground, Maryland, October 2005).

<sup>9</sup>Previously, after the Army's Armament Research, Development, and Engineering Center at Picatinny Arsenal, New Jersey, tested MILITEC-1 and found the product did not meet specifications, Militec, Inc., expressed a concern that this facility did not evaluate its product fairly and would not evaluate it fairly in any future testing.

<sup>10</sup>Army officials told us that after the study's completion they discovered that one of the participating cleaner, lubricant, and preservative vendors had changed its formula but, in violation of Army policy, had not informed the Army of the change. The Army consequently removed the vendor from the qualified products list for cleaner, lubricant, and preservative products. These officials said the vendor subsequently resubmitted its product for test and evaluation, and a decision is now pending.

## MILITEC-1 Did Not Pass Any Tests and Evaluations as a Metal Conditioner or a General Purpose Lubricant

In July 1995, the Army sought to develop a specification for a metal conditioner and issued a call to industry to solicit samples for test and evaluation. Militec, Inc., was the only vendor to submit a product. A test and evaluation completed in July 1996 by the Army's Tank-automotive and Armament Command found that MILITEC-1 had lubricating characteristics but was inadequate for corrosion protection. Militec, Inc., appealed the finding, but Army officials affirmed the validity of the test. They invited Militec, Inc. to reformulate its product to address the corrosion issue and then resubmit it for further test and evaluation. In December 1995, the Army Missile Command tested and evaluated MILITEC-1 for its corrosion resistance properties on steel and aluminum alloys. Army officials told us that this test and evaluation was intended to determine whether MILITEC-1 performed better than metal conditioners already in use for providing corrosion resistance. The results indicated that MILITEC-1 did not perform better. Therefore, Army officials concluded that they would not further consider MILITEC-1 the standard for specifications. In July 1997, the Army Tank-Automotive and Armament Command conducted a test and evaluation of MILITEC-1 as a possible lubricant for weapons seals but stopped the test after 1 hour after observing extensive corrosion.

In April 2006 the Army performed a test and evaluation of MILITEC-1 as a general purpose lubricant and informed DLA that MILITEC-1 did not meet the requirements of the general purpose lubricant specification.

## MILITEC-1 Demonstrated Some Positive Attributes as a Lubricant Additive in Two Early Tests and Evaluations, but Did Not Pass a Subsequent Test and Evaluation

Before MILITEC-1 was considered for DOD use as a small arms weapons system lubricant, it was marketed to the Navy, Marine Corps, and Army as a friction-reducing lubricant additive. In two early Navy and Marine Corps tests and evaluations of the product as a lubricant additive, it demonstrated some positive attributes, but the product did not pass a subsequent test and evaluation as a lubricant additive. Furthermore, DOD has had a standing prohibition against the use of lubricant additives containing chlorine since late 1950s—prior to the Navy and Marine Corps test and evaluations. MILITEC-1 contains chlorine. DOD and Navy officials could not explain why the Navy and Marine Corps conducted these tests and evaluations, given that MILITEC-1 has always contained chlorine.

In May 1988 the U.S. Marine Corps Research, Development, and Acquisition Command received samples of MILITEC-1 from Militec, Inc., and conducted a test and evaluation to determine whether a jeep using MILITEC-1 as a lubricant additive could operate longer and travel farther after losing engine oil.<sup>11</sup> In July 1988 the test

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<sup>11</sup>In 1984 Militec, Inc. (then known as Giordani Enterprises) requested that the Navy consider MILITEC-1 (at that time not yet called MILITEC-1) for use as a lubricant additive. The Navy gave Militec, Inc., the DOD regulations on methodology for test and evaluation of lubricant additives, and informed the company that the Army was the agency responsible for selecting DOD's lubricant additives. The Navy offered to test and

and evaluation was performed—the first time to our knowledge that DOD tested and evaluated the product. The test and evaluation showed that a jeep for which MILITEC-1 had been added to the engine oil exhibited improved engine friction reduction and could be driven for a longer time and at greater mileage than a jeep without the product. DOD was unable to provide us information regarding whether the Marine Corps purchased the product as a result of this test and evaluation. In April 1989 the Navy’s Atlantic Fleet completed an operational test and evaluation of MILITEC-1 lubricant additive in various internal combustion engines and gearboxes. Fleet officials reported improved friction-reducing attributes and recommended MILITEC-1 for interim use in the Navy. Citing these results and those of the Marine Corps test and evaluation described above, the Assistant Deputy Under Secretary of the Navy for Safety and Survivability approved a limited qualification authorizing the use of MILITEC-1 as a lubricant additive on mechanical equipment for a duration not exceeding 2 years.

In July 1989, however, the Army Armament Research, Development, and Engineering Center, in correspondence with the Assistant Secretary of the Navy for Shipbuilding and Logistics, reported that it had not been able to conduct any tests and evaluations of MILITEC-1 as a lubricant additive because it had not received specific details from Militec, Inc., about preliminary screening test outcomes as called for by a DOD guide on the methodology for the test and evaluation of lubricant additives. Army officials noted that, while they had received numerous queries and proposals from Militec, Inc., on the adoption of MILITEC-1 as a lubricant additive, Militec, Inc., had not responded to the Army’s additional request for data and communication of the requirements of its regulation. In 1991, the Army Materiel Command again provided Militec, Inc., with a written copy of the procedures it needed to perform in order to qualify its product as a lubricant additive, reiterating that the Army would not authorize the use of the product as an additive without an independent lab test and evaluation approved by the Army.

In May 1992, after examining the results of previous tests and evaluations and consultations with industry, the Naval Sea Systems Command declined to sponsor NSNs for MILITEC-1 as a lubricant additive. In addition, in June 1992 the Naval Sea Systems Command issued a Fleet Advisory to “stop adding MILITEC-1 to all lubricating oils” and to “dispose of any unused stock of MILITEC-1” in part because the product contains chlorine and the Navy’s policy to ban the use of lubricant additives that contain chlorine.

Nevertheless, in July 1994, the Naval Research Lab tested and evaluated MILITEC-1 for possible use as a lubricant additive on shipboard machinery. This test and evaluation found that MILITEC-1 contained chlorine and when combined with machinery manufacturer’s oils would result in damage to bearings and other machine components. DOD officials stated that this was corrosion-related damage. DOD officials told us they do not know why the Navy conducted this test and evaluation, given the aforementioned prohibition against lubricants containing chlorine.

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evaluate the product against ship system requirements once it successfully passed the Army’s test and evaluation against lubricant additive specifications.

Even though MILITEC-1 has not passed numerous military tests, Militec, Inc., continues to market it for use as a small arms lubricant to DOD, and it asserts that the current product specification is flawed and that MILITEC-1 prevents weapons from jamming. The Army has extended to Militec, Inc., the opportunity either to demonstrate how its product has been modified to conform to the current military specification for a small arms lubricant or indicate why the specification should be modified. According to DOD officials, Militec, Inc., has not done so. Militec, Inc., officials told us that they agree that their product has never met the military specification, but they asserted that the specification is not relevant to the current desert environment in which the product is intended to function—an assertion which, they note, is supported by the numerous laudatory testimonials they have received from deployed servicemembers. Militec, Inc., officials asserted that these servicemembers used the product as a lubricant on a variety of small arms.

Militec, Inc., officials also assert that their product helps prevent weapons from jamming, while the approved lubricant can promote jamming. However, they have not provided any support for their claim to DOD. Army officials told us that they are unaware of any indications that weapons have jammed as a result of servicemembers' using the approved lubricant product. Furthermore, we reviewed numerous DOD logistics, readiness, and other documents and could find no mention of weapons jamming in relation to use of a lubricant product. To address reports of episodes of small arms jamming during combat operations in Iraq, in June 2003 the Army completed a study that assessed small arms performance and the use of many small arms lubricants. One of its key findings was that rigorous daily cleaning is required to maintain performance, regardless of which lubricant was used.

### **DLA Did Not Consistently Follow Applicable DOD Procedures in Assigning and Canceling or Blocking National Stock Numbers for MILITEC-1**

DLA did not follow applicable DOD procedures in 1993 and 1995 when it assigned NSNs for MILITEC-1 without having first obtained approval from the military services, according to agency officials; however, the agency did follow applicable procedures when it subsequently canceled or blocked NSNs, according to DLA officials. DLA assigned several NSNs for MILITEC-1 in 1993 and 1995, and canceled NSNs in 1994 and 2003. By 2007, DLA had canceled or blocked for DOD purchase all NSNs associated with MILITEC-1.

### **DLA Did Not Follow Applicable Procedures When It Assigned National Stock Numbers in 1993 and 1995**

According to DLA officials, the agency did not follow applicable DOD procedures when it assigned NSNs to MILITEC-1 in 1993 and 1995. In August 1993 DLA assigned five NSNs for MILITEC-1 as a lubricant additive, even though it did not have the approval of the services' engineering support activities—the designated authorities who have technology oversight of products—and the Navy had declined to sponsor NSNs for MILITEC-1 as a lubricant additive a year earlier, in May 1992. DLA officials

told us that the 1993 assignment of NSNs violated the agency's procedures because it should have obtained the approval of the services, and that it occurred because of the agency's push toward the use of commercial off-the-shelf products.

In June 1994, DLA initiated action to cancel the MILITEC-1-associated NSNs because of a lack of engineering support activity approval and notified Militec, Inc., of its intention. In 1995, 19 members of Congress signed and sent a letter to the Secretary of Defense requesting that the Militec, Inc., product be made available to the military, emphasizing DOD's policy for preferential purchasing of commercial off-the-shelf items. Subsequently, according to DOD documentation, a meeting was held and a compromise reached between Militec, Inc. representatives and officials representing DLA and other DOD organizations. According to the compromise, DLA assigned three new NSNs for MILITEC-1's use as a small arms lubricant as directed by the Office of the Secretary of Defense. At the same time, DLA blocked the five lubricant additive NSNs from DOD purchase. The Navy representative opposed this compromise. According to DLA officials, the Army was not invited to participate in the meeting, though it is the executive agent for oils and lubricants and had previously disapproved MILITEC-1 as a small arms lubricant. Neither DLA or Army officials could explain why the Army was left out of the meeting. Moreover, it is not clear from DOD documents why the Office the Secretary of Defense approved MILITEC-1's use as a small arms lubricant.

#### DLA Followed Applicable Procedures When It Canceled National Stock Numbers

According to DLA officials, the agency did follow applicable procedures when it canceled or blocked NSNs, as requested by the services, from the mid-1990s through 2007.

For example, following the assignment described above of the three NSNs for small arms lubricants in 1995, DLA officials contacted the engineering support activities in each service to determine their positions regarding MILITEC-1's use on small arms. Upon learning that none of the services would approve such use, DLA placed a block on the three new NSNs, preventing any DOD purchases of MILITEC-1 from the federal supply system.

Over time, however, DLA failed to maintain the block on the three small arms lubricant NSNs and the five lubricant additive NSNs. MILITEC-1 reappeared in DLA's stock system and, in March 2003, DLA officials noted and questioned an uptick in requisitions for it. Upon investigation, they discovered that the 1995 blocks had been inadvertently removed due to computer system updates. DLA canceled all associated solicitations and re-established the block on all MILITEC-1 NSNs. DLA notified the Army engineering support activity, which supported the cancellation action. Nonetheless, in April 2003 the Army requested that DLA suspend the block and resume issuing MILITEC-1 for a trial period of 60 days—from May 1 to July 1, 2003. According to a senior Army official, this temporary issuance was granted in order to assess wartime demand for the product and to address Militec, Inc., officials' concerns that the Army was biased against their product.

DLA then consolidated all eight existing NSNs for MILITEC-1 into the Federal Supply Class that includes small arms lubricants, and it proceeded to fill the requisitions until August 2003, at which time the Army requested that DLA reinstate the block for DOD users. In addition, DLA canceled three NSNs because they corresponded to container sizes that did not support Army small arms requirements. Therefore, in August 2003, there were five blocked NSNs associated with MILITEC-1 for use as a small arms lubricant. In October 2003 the Army reversed its position and requested that DLA resume filling requisitions for MILITEC-1 while it conducted an independent test and evaluation for small arms lubricants as discussed previously. In January 2006, following a testing process that had to be developed and coordinated with industry, the Army advised DLA that it no longer wished to purchase MILITEC-1 as a small arms lubricant, because the product had been shown not to meet specifications in the desert lubricant test and evaluation.

In 2007, DLA initiated efforts to cancel the five remaining NSNs associated with MILITEC-1 and coordinated with all users according to its procedures. NATO, which was listed as a user of the five NSNs objected to the cancellation of four NSNs and did not respond regarding the fifth. According to DLA officials, NATO routinely does not concur with NSN cancellations. However, DLA considers a non-response as concurrence and canceled one of the five NSNs. The other four NSNs have since 2007 remained blocked from purchase by DOD users but are still available for purchase by NATO.

### **Agency and Third-Party Comments and Our Evaluation**

DOD was given an opportunity to review and comment on a written draft of this report, and DOD did not provide any comments other than minor technical comments. We incorporated these into the body of the report as appropriate.

Militec, Inc., provided us with oral comments in response to reading a draft statement of facts of our report. The company officials said that while they agree that the material in our draft is substantially correct, they believe the draft contains insufficient references to material that they provided to us during the course of our work.

First, Militec, Inc., officials challenged the Army's testing procedures and its specifications, asserting that our report did not amply present their objections to both. With regard to testing, they repeated their assertions that the Army's testing procedures are not performed correctly, and they objected to the fact that Militec, Inc., officials were not allowed to be present when a particular test was conducted. They asserted that their product is a "performance rather than conformance" product, and thus is disadvantaged by Army testing procedures that do not enable it to perform as it is meant to perform. Without having been present at testing, they contend, they cannot be assured that the test was conducted in accordance with the proper usage of their product. However, as Militec, Inc., officials themselves noted, the Army's testing protocol is part of its specifications. While Militec, Inc. believes that these strict specifications disadvantage its product in testing, Army officials told us the tests reflect the service's focus on critical military requirements. Further, we note that the Army did not allow any contractors to be present at the test to which

Militec, Inc., officials were referring. With regard to Army specifications, Militec, Inc., officials contended that the Army specifications are flawed because they do not correlate to the real world—for example, by testing corrosion resistance in a gun that has been fired. However, we note that the Army’s tests included live fire tests. Further, as noted in our report, Army officials told us that their specifications are in part based on real world conditions, as experienced by the warfighter. We also reiterate, as we have noted above, that we did not evaluate the validity of the military specifications, as to do so would exceed the scope of our objectives.

Second, Militec, Inc., officials expressed their view that our report does not amply convey the magnitude of customer testimonials in improving the efficacy of their product, noting that they have received tens of thousands of unsolicited laudatory testimonial e-mails from customers, and noting anecdotal commendations from veterans whom they have met. We have reviewed many e-mailed testimonials that Militec, Inc., officials shared with us, and we note them in our report. However, irrespective of their number, these testimonials are not relevant to the testing and evaluation or assigning and canceling of national stock numbers for MILITEC-1, the review of which constituted our objectives.

Third, Militec, Inc., officials challenge the Army’s rejection of MILITEC-1 on the basis of its corrosiveness. Militec, Inc., officials asserted that the “concealed carry” conditions characterizing the U.S. Secret Service’s use of weapons create an environment that is corrosive for weapons, and yet this organization uses MILITEC-1. Similarly, they asserted that the Coast Guard uses weapons that are exposed to a highly corrosive salt atmosphere, and that organization also uses MILITEC-1. Militec, Inc., officials asserted that if their product were corrosive, these organizations would have reported that fact. Our report notes that several nonmilitary government organizations, including the U.S. Secret Service, the U.S. Park Service, and the Police Department of the U.S. Supreme Court, purchase and use MILITEC-1. However, it is beyond the scope of our report to comparatively evaluate the properties of the product that cause it to pass the specifications of those organizations, while not passing DOD’s specifications.

Fourth, Militec, Inc., officials raised objections to the fact that our report addressed their product’s performance in categories other than small arms lubricant, which is the only category in which they are now marketing their product to DOD. We included the information of the Army’s testing of MILITEC-1 as a metal conditioner, general purpose lubricant, and lubricant additive in order to provide a fuller perspective of the testing and evaluation of MILITEC-1 and a comprehensive history of DOD’s assigning and canceling of national stock numbers for the product.

Finally, Militec, Inc., officials commented that the draft did not address their concern that in 2005 the Army granted a competitor the national stock numbers that had been assigned to MILITEC-1, based upon falsified documentation provided by that competitor, and in so doing enabled this competitor to obtain a contract that otherwise would have gone to Militec, Inc. However, during the course of our work Army and DLA officials told us that from their review of this matter they considered the allegation of fraud to be unsubstantiated. They said it appeared to be a misunderstanding of how the process works. National stock numbers are not

generally assigned exclusively to a manufacturer; rather, a single stock number can apply to one or several manufacturers who make products that perform a given, required function. This description comports with our understanding of the process, as described in the body of our report. DLA officials told us that although they assigned the stock number to the second manufacturer in 2005, they canceled the stock number to both manufacturers in 2006, because both manufacturers failed to meet the specifications for either small arms lubricant or general purpose lubricant. Because of the circumstances concerning the canceled stock number in 2006, we did not believe this issue warranted further review or reporting.

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We are sending copies of this report to the Secretary of Defense, the Secretary of the Army, and the Director of the Defense Logistics Agency. In addition, the report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff has any questions on the information discussed in this report, please feel free to contact me at (202) 512-8365 or [solisw@gao.gov](mailto:solisw@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 Marilyn Wasleski, Assistant Director; William Bates; Colin Chambers; Oscar Mardis; Karen Thornton; Cheryl Weissman; and Allen Westheimer.

A handwritten signature in black ink, appearing to read 'W. Solis', with a long horizontal flourish extending to the right.

William M. Solis  
Director, Defense Capabilities and Management

**Timeline on the Efforts to Test and Evaluate, and Assign and Cancel, National Stock Numbers for MILITEC-1**

- 1984: Militec, Inc. (at that time known as Giordani Enterprises) requested that the Navy consider MILITEC-1 (at that time not yet called MILITEC-1) for use as a lubricant additive. The Navy gave Militec, Inc., the Department of Defense (DOD) regulations on methodology for test and evaluation of lubricant additives, and informed the company that the Army was the agency responsible for selecting DOD's lubricant additives. The Navy offered to test and evaluate the product against ship system requirements once it successfully passed the Army's test and evaluation against lubricant additive specifications.
- May 1988: The U.S. Marine Corps Research, Development, and Acquisition Command received samples of MILITEC-1 from Militec, Inc. and conducted a test and evaluation to determine whether a jeep using MILITEC-1 as a lubricant additive could operate longer and travel farther after losing engine oil. In July 1988 the test and evaluation was performed—the first time to our knowledge that DOD tested and evaluated the product. The test and evaluation showed that a jeep for which MILITEC-1 had been added to the engine oil exhibited reduced engine friction and could be driven for a longer time and at greater mileage than a jeep without the product.
- April 1989: The Navy's Atlantic Fleet completed an operational test and evaluation of MILITEC-1 as a lubricant additive in various internal combustion engines and gearboxes. Fleet officials reported improved friction-reducing attributes and recommended MILITEC-1 for interim use in the Navy. Citing these results and those of the Marine Corps test and evaluation described above, the Assistant Deputy Under Secretary of the Navy for Safety and Survivability approved a limited qualification authorizing the use of MILITEC-1 as a lubricant additive on mechanical equipment for a duration not exceeding 2 years.
- July 1989: The Army Armament Research, Development, and Engineering Center, in correspondence with the Assistant Secretary of the Navy for Shipbuilding and Logistics, reported that it had not been able to conduct any test and evaluations of MILITEC-1 as a lubricant additive because it had not received specific details of preliminary screening test outcomes as called for by a DOD guide on the methodology for the test and evaluation of lubricant additives.
- April 1990: The DOD Standardizations Office asked the Army to evaluate MILITEC-1 against the small arms lubricant military specification for cleaning, lubrication, and preservation.
- July 1990: The Army performed a test and evaluation of MILITEC-1 as a small arms lubricant. The Army concluded that MILITEC-1 did not meet military specifications and could not qualify to become an approved product because it did not have a cleaning component and did not meet the cold temperature

requirements. The Army noted that MILITEC-1 would need to be reformulated before it could meet the military specifications for a small arms lubricant.

- April 1991: The Navy conducted a live fire study to test and evaluate eight commercial gun lubricants for their ability to increase the velocity and accuracy of the M-16A1 rifle. These lubricants included MILITEC-1 as well as the approved cleaning, lubrication, and preservation product. The study found that the advantages in velocity and accuracy claimed by Militec, Inc., were not achieved. The study also found that MILITEC-1 posed a possible health hazard following both acute and chronic overexposure to the skin, and it noted that the product should not be recommended for use.
- 1991: The Army Materiel Command provided Militec, Inc., with the written procedures Militec, Inc., needed to perform in order to qualify its product as a lubricant additive, reiterating that the Army would not authorize the use of the product as an additive without independent lab test and evaluation approved by the Army.
- May 1992: After examining the results of previous tests and evaluations and consultations with industry, the Naval Sea Systems Command declined to sponsor national stock numbers (NSN) for MILITEC-1 as a lubricant additive.
- June 1992: The Naval Sea Systems Command issued a Fleet Advisory to “stop adding MILITEC-1 to all lubricating oils” and to “dispose of any unused stock of MILITEC-1,” in part because the product contains chlorine, and Navy policy bans the use of lubricant additives that contain chlorine.
- July 1992: The Navy conducted a test and evaluation to determine which small arms lubricants would perform best in environments of airborne dust and fine sand, high temperature and corrosive airborne salts. The Navy tested and evaluated 14 commercial small arms lubricants, including MILITEC-1, in these environments. The Navy found in the dust tests with various exposure times that although more dust accumulated on the exposed exterior surfaces of bolt carriers with liquid lubricants than on bolt carriers with dry film lubricants, the liquid lubricants had more success overcoming friction caused by dust intrusion. The Navy also found that during the airborne salts test, one dry film lubricant and one liquid lubricant provided the most protection from corrosion; all other lubricants (including MILITEC-1) provided poor corrosion protection in this test. Therefore, the Navy concluded that that none of the lubricants provided significant benefits over the approved cleaning, lubrication, and preservation product, which it found to be adequate for general use in these environments. This test was not conducted against a specific military specification.
- August 1993: In response to DOD’s push toward the use of commercial off-the-shelf products, MILITEC-1 was assigned its first NSNs. DLA assigned five NSNs for MILITEC-1 as a lubricant additive, even though it did not have the approval of the services’ engineering support activities.

- June 1994: DLA initiated action to cancel MILITEC-1-associated NSNs as a lubricant additive because of a lack of engineering support activity approval and notified Militec, Inc., of its intention.
- July 1994: The Naval Research Lab tested and evaluated MILITEC-1 for possible use as a lubricant additive on shipboard machinery. This test and evaluation concluded that MILITEC-1 contained chlorine and, when combined with machinery manufacturer's oils, would result in damage to bearings and other machine components. DOD officials stated that this was corrosion-related damage. The Navy had previously banned the use of MILITEC-1 as a lubricant additive because it contained chlorine.
- March 1995: Nineteen Members of Congress signed and sent a letter to the Secretary of Defense requesting that MILITEC-1 be made available to the military, emphasizing DOD's policy for preferential purchasing of commercial off-the-shelf items.
- March 1995: A compromise was reached between Militec, Inc., representatives and officials representing DLA and other DOD organizations. According to the compromise, DLA assigned three new NSNs for MILITEC-1's use as a small arms lubricant as directed by the Office of the Secretary of Defense and DLA blocked the five lubricant additive NSNs from DOD purchase.
- July 1995: The Army sought to develop a specification for a metal conditioner and issued a call to industry to solicit samples for test and evaluation. Militec, Inc., was the only vendor to submit a product. The metal conditioner test and evaluation completed by the Army's Tank-automotive and Armament Command in July 1996 found that MILITEC-1 had lubricating characteristics but was inadequate for corrosion protection. Therefore, Army officials concluded that they would not further consider MILITEC-1 the standard for specifications. Militec, Inc., appealed the finding, but Army officials affirmed the validity of the test. They invited Militec, Inc., to reformulate its product to address the corrosion issue and resubmit it for further test and evaluation.
- December 1995: The Army Missile Command tested and evaluated MILITEC-1 for its corrosion resistance properties on steel and aluminum alloys. Army officials told us that the test and evaluation results indicated that MILITEC-1 did not perform better than metal conditioners already in use in providing corrosion resistance, and therefore they concluded they did not want to purchase the product.
- July 1997: The Army Tank-Automotive and Armament Command conducted a test and evaluation of MILITEC-1 as a lubricant for weapons seals but stopped the test after 1 hour after observing excessive corrosion.

- 2003: Alerted by an uptick in Army requisitions for MILITEC-1, DLA discovered that the block instituted in 1995 for military requisitions of MILITEC-1-associated NSNs was no longer in place, due to computer system updates. DLA canceled requisitions for purchases under MILITEC-1 NSNs and re-established the block.
- April 2003: The Army, citing demands associated with the war in Iraq, requested that DLA suspend the block on MILITEC-1 and resume issuing the product for a trial period of 60 days—from May 1 to July 1, 2003. According to a Senior Army official, this temporary issuance was granted in order to assess wartime demand for the product and to address Militec, Inc., officials' concerns that the Army was biased against their product. The action was also undertaken in part in response to MILITEC-1 testimonials and to a Program Executive Officer / Soldier report indicating that servicemembers were using the product. Army documents show that less than \$3,000 worth of the MILITEC-1 was purchased. DLA then consolidated all eight existing NSNs for MILITEC-1 into the Federal Supply Class that includes small arms lubricants and canceled three NSNs because they corresponded to container sizes that did not support Army small arms requirements.
- June 2003: The Army completed a study that addressed reported episodes of small arms jamming during combat operations in Iraq. The study assessed small arms performance and many small arms lubricants. One of its key findings was that rigorous daily cleaning is required to maintain performance, regardless of which lubricant was used.
- August 2003: At the end of the 60-day window, the Army requested that DLA reinstate the block for DOD users from requisitioning MILITEC-1.
- September 2003: Following the 60-day window for issuance of MILITEC-1, Army Research, Development, and Engineering Command and Army Tank-Automotive and Armament Command requested that DLA restrict small arms lubricant purchases to the approved cleaner, lubricant, and preservative. MILITEC-1 requisitions were canceled by DLA.
- October 2003: The Army Materiel Command, after receiving numerous testimonials from servicemembers regarding the efficacy of MILITEC-1 in Iraq, made the decision to conduct another test and evaluation of small arms lubricants. Concerned about the perception of bias at the test and evaluation location for small arms lubricants, the Army Materiel Command also decided to conduct the test and evaluation at another Army test and evaluation facility. In addition, the Army focused its test and evaluation on the small arms lubrication properties of the military specification in a desert environment and issued a solicitation to industry. A total of 23 products, including MILITEC-1, along with the 2 qualified cleaning, lubrication, and preservation products, were submitted for the desert lubricant test and evaluation.

- 2003–2005: Over the 2 years of the test and evaluation period, DLA purchased about \$2.3 million of MILITEC-1.
- January 2005: Noting the increased demand for the NSNs associated with MILITEC-1, DLA issued a solicitation to vendors for long-term contracts.
- July 2005: The Army Infantry Center (users of small arms) requested that Army Materiel Command help ensure that only approved small arms lubricants were issued NSNs, and that any such product issued an NSN without being tested and evaluated against a performance specification be labeled “Not approved for small arms use.”
- October 2005: The final results of the desert lubricant test and evaluation were determined. MILITEC-1, along with 15 other products, did not pass the initial live fire test because of excessive firing malfunctions.
- January 2006: The Army notified DLA that based on the results of the desert lubricant test and evaluation, it would not further consider MILITEC-1 as a small arms lubricant but instead would test and evaluate it against the general purpose lubricant specification.
- April 2006: The Army informed DLA that MILITEC-1 did not meet the requirements of the general purpose lubricant specification and that it no longer wanted to be listed as a user of MILITEC-1.
- December 2006: Informed of the results of the desert lubricant test and evaluation, the Army’s Tank-Automotive and Armament Command issued a ground precautionary message advising Army operational units to use only the approved cleaner, lubricant, and preservative for small arms lubricants and that small arms reliability could be compromised if other products were used.
- December 2006: The Center for Naval Analysis released an Army-sponsored study that sought to obtain a broader understanding of soldiers’ views about their small arms in combat. One of the conclusions reached in the report was that soldiers had confidence in the reliability of their small arms, irrespective of whether the small arms lubricant was approved or not.
- 2007: DLA initiated efforts to cancel all five remaining NSNs associated with MILITEC-1 and coordinated with all users according to its procedures.
- 2007: DLA could not cancel four NSNs because NATO did not concur with their cancellation and it did not respond regarding the fifth. As a result, DLA canceled one NSN and blocked the other four NSNs to DOD users.

### **Scope and Methodology**

To obtain an understanding of the extent to which the Department of Defense (DOD) and the military services have tested and evaluated MILITEC-1 as a small arms lubricant, metal conditioner, general purpose lubricant, and a lubricant additive and with what results, we obtained and reviewed available DOD instructions, manuals and publications, and test and evaluation reports on MILITEC-1 and other products. We gained an understanding of the test and evaluation efforts by conducting extensive interviews with agency officials who either conducted or had expertise on the tests and evaluations. We did not, however, observe testing or evaluate test results, given the considerable lapse in time since such tests had occurred. We also did not evaluate the validity of the military specifications. We conducted interviews with officials from the Army Materiel Command, Alexandria, Virginia; the Army Research, Development, and Engineering Command at Aberdeen Proving Ground, Maryland; the Army Armament Research, Development, and Engineering Center, Picatinny Arsenal, New Jersey; the Army Research Laboratory at Aberdeen Proving Ground, Maryland; and the Army Test and Evaluation Command, Arlington, Virginia. In addition, we interviewed officials from the United States Army Forces Command, Fort McPherson, Georgia. We also met with officials from Militec, Inc., to gain their perspective on their product and their experiences with DOD. We also interviewed Army National Guard officials, other servicemembers, selected federal and municipal law enforcement organizations, and a small arms manufacturer to attain their perspectives with respect to small arms lubricant testing and evaluation issues. We also interviewed officials from the United States Infantry Center at Fort Benning, Georgia.

To obtain an understanding of the extent to which the Defense Logistics Agency (DLA) followed applicable procedures in assigning and subsequently canceling national stock numbers (NSN) to MILITEC-1, we obtained and reviewed applicable DOD logistics documents and met with DOD officials. However, DOD officials were unable to provide complete information regarding early DOD policies governing the assigning and canceling of NSNs due to the passage of time, as some of the responsible officials are no longer employed by DLA. We interviewed officials at the Office of the Secretary of Defense, Arlington, Virginia; DLA, Fort Belvoir, Virginia; the Defense Supply Center at Richmond, Virginia; the Defense Logistics Information Service, Battle Creek, Michigan; and the Army Materiel Command at Fort Belvoir, Virginia. In addition, we interviewed officials from the United States Marine Corps, 4<sup>th</sup> Marine Division, New Orleans, Louisiana. We also met with officials from Militec, Inc., to learn their perspective with regard to the assigning and canceling of NSNs for their product. Additionally, we reviewed numerous testimonials they provided us from deployed servicemembers who used the product, and other company documents.

In order to construct our timeline on the efforts of Militec, Inc., to market its product to DOD and the services, and DOD's response to those efforts, we interviewed and obtained documents from DOD officials at the Office of the Secretary of Defense,

Arlington, Virginia; DLA, Fort Belvoir, Virginia; the Defense Supply Center, Richmond, Virginia; the Defense Logistics Information Service, Battle Creek, Michigan; the Army Materiel Command, Fort Belvoir, Virginia; the Army Research, Development, and Engineering Command, Aberdeen Proving Ground, Maryland; the Army Armament Research, Development, and Engineering Center, Picatinny Arsenal, New Jersey; and the Army Research Laboratory, Aberdeen Proving Ground, Maryland, as well as from officials at Militec, Inc.

We conducted this performance audit from July 2008 through June 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.

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