Report No. D-2008-089

May 9, 2008

# Inspector General

United States Department of Defense



Planning Armor Requirements for the Family of Medium Tactical Vehicles

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#### Acronyms

FMTV	Family of Medium Tactical Vehicles
LSAC	Low-Signature Armored Cab
LTAS	Long-Term Armoring Strategy
ONS	Operational Needs Statement
ORD	Operational Requirements Document



#### INSPECTOR GENERAL DEPARTMENT OF DEFENSE 400 ARMY NAVY DRIVE ARLINGTON, VIRGINIA 22202–4704

May 9, 2008

#### MEMORANDUM FOR AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Report on Planning Armor Requirements for the Family of Medium Tactical Vehicles (Report No. D-2008-089)

We are providing this final report for review and comment. This report addresses the Army's planning of armor requirements for the Family of Medium Tactical Vehicles. This report is the second report on the Army's acquisition of the Family of Medium Tactical Vehicles. In preparing the final report, we considered comments from the Director, Capabilities Integration, Prioritization, and Analysis in the Office of the Deputy Chief of Staff G-3/5/7; the Deputy Director Soldier, Maneuver and Sustainment Systems in the Office of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology); the Deputy Commander, U.S. Army Force Management Support Agency, responding for the Commander, U.S. Army Force Management Support Agency; and the Director, Internal Review and Audit Compliance responding for the Commander, U.S. Army Training and Doctrine Command.

In response to comments received from the Deputy Commander, U.S. Army Force Management Support Agency, we revised Recommendation 3. for clarity. We did not receive comments on the draft report from the Army Deputy Chief of Staff, G-8. DoD Directive 7650.3 requires that all recommendations be resolved promptly. Therefore, we request that the Army Deputy Chief of Staff, G-8, provide comments on Recommendation 2. by June 9, 2008.

If possible, please send management comments in electronic format (Adobe Acrobat file only) to <u>AUDACM@dodig.mil</u>. Copies of the management comments must contain the actual signature of the authorizing official. We cannot accept the / Signed / symbol in place of the actual signature. If you arrange to send classified comments electronically, they must be sent over the SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Questions should be directed to Mr. John E. Meling at (703) 604-9091 (DSN 664-9091) or Mr. Kevin W. Klein at (703) 604-9032 (DSN 664-9032). See Appendix D for the report distribution. The team members are listed inside the back cover.

Richard B. Jolliffe Assistant Inspector General Acquisition and Contract Management

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#### **Department of Defense Office of Inspector General**

**Report No. D-2008-089** (Project No. D2006-D000AE-0225.001) May 9, 2008

# Planning Armor Requirements for the Family of Medium Tactical Vehicles

#### **Executive Summary**

**Who Should Read This Report and Why?** Army officials responsible for generating, processing, and approving acquisition requirements should read this report because it discusses the Army's use of the operational needs statements to determine and fill theater-wide armor kit requirements rather than satisfying those requirements through the Joint Capabilities Integration and Development System.

**Background.** The Family of Medium Tactical Vehicles (FMTV) program consists of Light-Medium Tactical Vehicles, which are 2<sup>1</sup>/<sub>2</sub>-ton trucks, and Medium Tactical Vehicles, which are 5-ton trucks. The FMTV program also includes complementary trailers that supplement the vehicle fleet. In January 1996, the Army approved an operational requirements document for Tactical Wheeled Vehicle Crew Protection Kits. The FMTV Program Office, however, did not procure any armor crew protection kits (armor kits) for medium tactical vehicles as specified in the operational requirements document. In addition, the Army never established a program for armor kits for the FMTV even though the operational requirements document for the FMTV included armor kit protection as an objective and was approved by the Army Deputy Chief of Staff G-3/5/7, in April 2003. From October 2003 through March 2005, the Army Deputy Chief of Staff, G-3/5/7, validated theater commanders' urgent needs for \* armor kits for FMTVs. On August 16, 2007, the Army Deputy Chief of Staff, G-3/5/7, validated theater commanders' urgent needs for another \* armor kits for medium tactical vehicles ( \* for the FMTV and \* for the M900 medium tactical vehicle) to support the force adjustment in the Central Command area of responsibility and to support the Global War on Terror.

**Results.** The Army used the operational needs statement process effectively to identify, validate, and fund theater commander armor kit urgent needs to support the Global War on Terror because the Army had not completed establishing armor kit requirements through the Joint Capabilities Integration and Development System process. Army Training and Doctrine Command personnel began the Joint Capabilities Integration and Development System process, the Army was not able to immediately distribute armor kits to support the increase in the number of troops in January 2007. Further, because they had not completed the process, Army Force Management Support Agency staff did not add armor kit requirements to the basis-of-issue plan and table of organization and equipment for the FMTV. Therefore, the Army needs to expedite the completion and approval of the capability documents for the FMTV, add armor requirements to the basis-of-issue plan and table of organization and equipment for future

<sup>\*</sup> For Official Use Only information omitted.

distribution of armor kits to enable the Army to more timely fill future warfighter requirements. (See the Finding section of the report for the detailed recommendations.)

The Army had adequate internal controls over the operational needs statement process, which resulted in the identification and filling of armor kit requirements for FMTVs. However, the Army should have initiated and expedited completion of the Joint Capabilities Integration and Development System process after the initial identification of the urgent need for armor kits for FMTVs in 2003.

**Management Comments and Audit Response.** We received comments from the Director, Capabilities Integration, Prioritization, and Analysis, responding for the Army Deputy Chief of Staff, G-3/5/7; the Deputy Director Soldier, Maneuver and Sustainment Systems, responding for the Assistant Secretary of the Army (Acquisition, Logistics, and Technology); the Director, Internal Review and Audit Compliance, responding for the Commander, Army Training and Doctrine Command; and the Deputy Commander, U.S. Army Force Management Support Agency.

The Director, Capabilities Integration, Prioritization, and Analysis agreed with the recommendations to expedite the completion and approval of the capability documents for the FMTV, add armor requirements to the basis-of-issue plan and table of organization and equipment for FMTVs, and complete an analysis for future distribution of armor kits to enable the Army to more timely fill future warfighter requirements. The Deputy Director, Soldier, Maneuver and Sustainment Systems stated that his office would support the Army Deputy Chief of Staff, G-8, in the development of distribution plans for the armor kits.

The Director, Internal Review and Audit Compliance concurred with the recommendation to complete a capabilities development document or a capability production document for armor kit requirements for the FMTVs. She stated that the Army Training and Doctrine Command will include protection and armoring requirements in all tactical wheeled vehicle requirements documents as part of its Long-Term Protection Strategy. She also stated that the Command will convert the 2003 FMTV Operational Requirements Document into Joint Capabilities Integration and Development System documentation that will include armoring and other protection requirements as part of the protection key performance parameter. The Deputy Commander, U.S. Army Force Management Support Agency concurred with the recommendation to update the basis-of-issue plan, but suggested a revision of the recommendation for clarity. We agreed with the suggestion and revised the recommendation accordingly. The management comments we received were responsive to the recommendations. See the Finding section of this report for a discussion of the management comments and the Management Comments section of this report for the complete text of the comments.

The Army Deputy Chief of Staff, G-8, did not provide comments on the draft report issued February 11, 2008. Therefore, we request that Army Deputy Chief of Staff, G-8, comment on this final report by June 9, 2008.

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# Background

This report is the second of two reports on the overall management of the Family of Medium Tactical Vehicles (FMTV). This report addresses the Army's planning to fulfill armor kit requirements for the FMTV and other medium tactical vehicle models being used to support the Global War on Terror. The first report addressed the Army's conditional acceptance and first inspection acceptance of FMTVs.

The FMTV program is a major Defense acquisition program that comes under the management oversight of the Program Executive Officer for Combat Support and Combat Service Support at the TACOM Life Cycle Management Command.<sup>1</sup> The program executive officer's mission is to develop, acquire, field, and sustain the soldier and ground systems for the warfighters by integrating effective and timely acquisition, logistics, and cutting-edge technology. The Project Manager Tactical Vehicles is responsible for managing the FMTV program and reports to the program executive officer. The Army Acquisition Executive is the milestone decision authority for the program. Research, development, test, and evaluation, and procurement funds for the FMTV program total approximately \$21 billion to acquire 83,185 vehicles by FY 2022. The program entered the production phase of the acquisition process in August 1995.

**Family of Medium Tactical Vehicle Variants.** The FMTV program consists of Light-Medium Tactical Vehicles, which are 2½-ton trucks, Medium Tactical Vehicles, which are 5-ton trucks, and companion trailers. The vehicles have component commonality and various body styles for special combat, combat support, and combat service support organizational missions. The FMTV is a series of trucks based on a common chassis and consists of cargo, tractor, van, wrecker, load handling system, and dump truck variants.

Joint Capabilities Integration and Development System. Normally, the Army Training and Doctrine Command fulfills warfighter equipment requirements through the Joint Capabilities Integration and Development System. The Joint Capabilities Integration and Development System process supports the statutory requirements of the Joint Requirements Oversight Council to validate and prioritize joint warfighting requirements. The primary objective of the Joint Capabilities Integration and Development System process is to ensure the joint warfighter receives the capabilities required to successfully execute the mission assigned to them. The Joint Capabilities Integration and Development System process is initiated through the development of a capabilities-based assessment, which is documented in the following capabilities documents.

<sup>&</sup>lt;sup>1</sup> Referred to in previous DoD Inspector General reports as the Tank-automotive and Armaments Command.

- An initial capabilities document contains the capability shortfalls in the existing weapon system and possible solutions to those shortfalls.
- A capabilities development document contains the technical performance criteria of the weapon system that meets the performance criteria specified in the initial capabilities document.
- A capability production document describes the actual performance of the weapon system that will go into production and must be validated and approved by the Joint Requirements Oversight Council before a production decision program review.

The initial capabilities document, the capabilities development document, and the capability production document replaced the operational requirements document when the Joint Capabilities Integration and Development System process was implemented in 2003.

**Operational Requirements for Armor.** In January 1996, the Army approved an operational requirements document (ORD) for the Tactical Wheeled Vehicle Crew Protection Kit. The armor kit is designed to protect crew members from small arms fire, artillery and mortar fire, mines, submunitions, and improvised explosive devices. Government Accountability Office Report No. GAO-06-160, "Several Factors Limited the Production and Installation of Army Truck Armor during Current Wartime Operations," March 2006, reported that the Army developed the ORD in response to operations in Haiti, Rwanda, and Somalia. The ORD contained a requirement for 2,000 armor kits for medium and heavy tactical wheeled vehicles. Of the 2,000 truck armor kits, 500 were for the FMTV. However, the Army did not fulfill the acquisition of 500 truck armor kits for the FMTV. The report stated that Army officials did not fulfill the ORD requirement because a need for armor kits in Army operations after Somalia did not materialize until the operations in Iraq. In addition, Army officials advised the Government Accountability Office that the Army did not have funding available to fully meet the 1996 requirements for armor kits due to the Army's other higher funding priorities. The report stated that, as a consequence, Army units initially went into Iraq with less protective capability than they might have if the Army had procured the armor kits specified in the 1996 Tactical Wheeled Vehicle Crew Protection Kit ORD.

**Operational Needs Statement Process for Armor Kits.** Army warfighters deployed to Iraq and other Central Command locations in support of the Global War on Terror used an operational need statement (ONS) to identify an urgent need for armor kits for FMTVs. ONS requests start at the unit level. The ONS requests are endorsed by theater commanders and forwarded up the organizational chain of command to the Army Central Coalition Forces Land Command, G-3/5/7, for theater-level review and endorsement. The requests are then forwarded to the Army Deputy Chief of Staff, G-3/5/7,<sup>2</sup> for validation and the Army Deputy Chief of Staff, G-8, for funding.

<sup>&</sup>lt;sup>2</sup> The Army Deputy Chief of Staff, G-3/5/7, was formerly the Army Deputy Chief of Staff for Operations (G-3).

If an urgent need is determined to be theater-wide instead of unit specific, staff at the Army Central Coalition Forces Land Component Command, G-3/5/7, stated that they request that units identify their requirements to Army Central Coalition Forces Land Component Command, G-3/5/7, staff. Army Central Coalition Forces Land Component Command, G-3/5/7, staff then prepare a consolidated ONS and forward it to the Army Deputy Chief of Staff, G-3/5/7, for validation and the Army Deputy Chief of Staff, G-8, for funding.

**Urgent Need for Armor Protection.** In October 2003, the Army Deputy Chief of Staff, G-3/5/7, validated an urgent need for 272 armor kits for FMTVs in support of Operation Iraqi Freedom. In July 2004 and March 2005, Army Central Coalition Forces Land Component Command, G-3/5/7, staff stated that they prepared theater-wide ONSs for \* armor kits for FMTVs and \* armor kits for M900 series medium tactical vehicles.

In February 2004, the Deputy Commander, TACOM Life Cycle Management Command approved a justification and approval for other than full and open competition to procure bolt-on armor kits for the FMTV from Radian, Inc. The justification and approval stated that Radian had already designed an armor kit and had developed a subcontractor base. Using this justification, the procuring contracting officer at the Command awarded contract orders from March 2004 through January 2005 for 1,822 armor kits totaling \$98.2 million to meet theater commander needs.

In August 2005, the TACOM Principal Assistant Responsible for Contracting approved justification and approvals for other than full and open competition<sup>3</sup> to purchase low-signature armored cabs (LSACs) from Stewart and Stevenson Tactical Vehicle Systems. The justification and approvals stated that procurement of LSACs was more desirable than the bolt-on armor kits because they weighed less, could be upgraded with appliqué armor to increase crew protection, had air conditioning, and had a faster install time. Further, the justification and approvals stated that Stewart and Stevenson Tactical Vehicle Systems designed and developed the LSAC and was the only source able to produce LSACs that met mission requirements. From July 2004 through September 2005, the procuring contracting officer awarded contract orders to Stewart and Stevenson Tactical Vehicle Systems for 2,060 LSACs totaling \$185.2 million. In addition, the Project Manager Tactical Vehicles stated that the contracting officer had procured 3,006 armor kits for installation on M900 predecessor medium tactical vehicles.

The Project Manager Tactical Vehicles stated that FMTV armor kit production was stopped at 3,882 (1,822 and 2,060) because FMTV armor kit production had exceeded the operational requirement of \* armor kits that

<sup>&</sup>lt;sup>3</sup> TACOM Life Cycle Management Command staff used the "unusual and compelling urgency" clause in section 2304(c)(2), title 10, United States Code (10 U.S.C. 2304(c)(2)) as implemented by Federal Acquisition Regulation (FAR) 6.302-2(a) and "Only one responsible source and no other supplies or services will satisfy agency requirements" 10 U.S.C. 2304(c)(1) as implemented by FAR 6.302-1 to initiate the contracts for the armor kits before formal validation of the operational needs statements.

<sup>&</sup>lt;sup>\*</sup> For Official Use Only information omitted.

was validated in operational needs statements submitted through March 2005.

Additional Armor Kit Requirements to Support Force Adjustments in the Central Command Area of Responsibility. On August 16, 2007, the Army Deputy Chief of Staff, G-3/5/7, validated a need for a total of \* <sup>4</sup> additional armor kits for medium tactical vehicles to support force adjustments in the Central Command area of responsibility. See the "Operational Needs Statements for Armor Kits" paragraph of the Finding for further details on the validation and delivery of armor kits to support the increase in the number of troops.

Armor Kit Contracts to Support Force Adjustment Requirement. To fulfill the requirement for the \* armor kits for medium tactical vehicles, the procuring contracting officer initially awarded an undefinitized contract order to Stewart and Stevenson Tactical Vehicle Systems on February 28, 2007, to procure 248 LSACs for FMTVs. On August 30, 2007, the contract order was definitized for \$16.8 million with an estimated completion date of October 31, 2007. On March 1, 2007, the procuring contracting officer awarded another undefinitized contract order to Stewart and Stevenson Tactical Vehicle Systems for an additional 197 LSACs for FMTVs. On August 23, 2007, the contract order was definitized for \$19.5 million with an estimated completion date of December 31, 2007. The Army Deputy Chief of Staff, G-8, Focused Logistics Division staff stated that the remaining requirement for 565 armor kits for FMTVs would be filled with spare and pre-positioned FMTV armor kits and refurbished M900 series medium tactical vehicles.

# **Objectives**

Our overall audit objective was to evaluate the Army armor kit requirements process and determine whether an adequate number of armor kits was procured or being procured to satisfy user requirements to support the Global War on Terror. In addition, we evaluated actions being taken by the Army to meet its future armor kit requirements. See Appendix A for a discussion of the scope and methodology and prior coverage related to the audit objective.

# **Review of Internal Controls**

We reviewed the Army's internal control procedures for implementing the ONS process and for identifying and filling armor kit requirements for medium tactical vehicles. The Army had adequate internal controls over the operational needs statement process, which resulted in the identification and filling of armor kit requirements for FMTVs from October 2003 through

<sup>&</sup>lt;sup>4</sup> \* of the \* armor kits were for FMTVs; the remaining \* armor kits were for the M900 series medium tactical vehicles.

<sup>\*</sup> For Official Use Only information omitted.

December 2007. However, the Army should have initiated and completed the Joint Capabilities Integration and Development System process after theater commanders identified the urgent need for armor kits in 2003. Instead, the Army began implementing the Joint Capabilities Integration and Development System process in 2005 through the development of the functional area analysis and the functional needs analysis. The Army began developing the draft functional solution analysis in 2007 to update the armor protection requirements and armor kit numbers identified in the 1996 operational requirements document to support the eventual preparation of a capability document for armor kits for medium tactical vehicles.

# **Planning for Family of Medium Tactical Vehicle Armor Needs**

The Army used the operational needs statement process effectively to identify, validate, and fund theater commander armor kit urgent needs to support the Global War on Terror because the Army had not been completed establishing armor kit requirements through the Joint Capabilities Integration and Development System process. This condition occurred because the Army Training and Doctrine Command did not finalize its armoring strategy for FMTVs through the Joint Capabilities Integration and Development System until November 2007. Army Training and Doctrine Command personnel began the Joint Capabilities Integration and Development System process in May 2005. However, because they had not completed the process, the Army was not able to immediately distribute armor kits to support the increase in the number of troops in January 2007. In addition, by not completing the process, Army Force Management Support Agency staff did not add armor kit requirements to the basisof-issue plan and the table of organization and equipment for medium tactical vehicles.

# **Policy on Generating Requirements and Issuing Equipment**

Chairman of the Joint Chiefs of Staff Instruction 3170.01F, "Joint Capabilities Integration and Development System," May 1, 2007<sup>5</sup>; Army Regulation 70-1, "Army Acquisition Policy," December 31, 2003; and Army Regulation 71-9, "Materiel Requirements," April 30, 1997; establish policies and procedures for the Joint Capabilities Integration and Development System process; govern the acquisition of Army materiel to satisfy approved Army requirements; implement Army acquisition policy for preparing materiel requirements documents; and assign responsibilities to Army organizations. In addition, Army Regulation 71-32, "Force Development and Documentation - Consolidated Policies," March 3, 1997, prescribes policies for developing the basis-of-issue plan and the table of organization and equipment.

**Chairman of the Joint Chiefs of Staff Instruction 3170.01F.** The Joint Capabilities Integration and Development System process is initiated through a capability-based assessment that includes three phases.

- The functional area analysis identifies operational tasks, conditions, and standards needed to accomplish objectives.
- The functional needs analysis assesses the ability of current and programmed capabilities to accomplish the tasks identified in the

<sup>&</sup>lt;sup>5</sup> Chairman of the Joint Chiefs of Staff Instruction 3170.01C "The Joint Capabilities Integration and Development System," June 24, 2003, replaced Chairman of the Joint Chiefs of Staff Instruction 3170.01B "Requirements Generation System," April 15, 2001.

functional area analysis. The end product of the functional area analysis and functional needs analysis is a list of capability gaps.

• The functional solutions analysis evaluates solutions from an operational perspective and results in a list of potential need-based solutions.

The results of the capability-based assessment are documented in an initial capability document. The Service or agency responsible for acquiring the weapon system then develops a capabilities development document that describes the technical approach to meet the needed capability and a capability production document that describes the actual performance of the system that will go into production. The Service or agency submits the capability document to the Joint Requirements Oversight Council, which validates and approves the capability documents for defense acquisition programs before program milestone decision points, such as program initiation.

**Army Regulation 70-1.** Army Regulation 70-1 requires the Army Deputy Chief of Staff, G-3/5/7, (formerly the Army Deputy Chief of Staff G-3) to develop Army policy and guidance for materiel requirements and combat development programs, to include the operational requirements generation process. It requires the Army Deputy Chief of Staff, G-3/5/7, to validate and integrate the review and evaluation of materiel requirements for all acquisition category programs; define and validate capability goals, materiel objectives, overall force structure design, and basis-of-issue plans; and approve the table of organization and equipment and basis-of-issue plan. Army Regulation 70-1 further states that all Army acquisition programs, regardless of the acquisition category, will be managed by a program or project manager. The designation of a program or project manager will be made no later than a program's system development and demonstration decision point in the acquisition process.

**Army Regulation 71-9.** Army Regulation 71-9 states that the requirements determination process will provide an existing and future Army capable of success in any contingency. The process will be responsive to the urgent materiel requirements of the deployed warfighter. It also states that field commanders will document and submit their urgent warfighting operational requirements in an ONS. The Army Deputy Chief of Staff, G-3/5/7, validates and approves field commanders ONSs. Army Regulation 71-9 states that the ONS provides an opportunity to the field commander to initiate the requirements determination process. It further states that all ONSs will be reviewed by the combat developer or training developer to determine applicability to future requirements or continuing need for which a standard requirement (capability document) and acquisition is needed.

**Army Regulation 71-32.** Army Regulation 71-32 requires the Army Force Management Support Agency to develop and coordinate the basis-of-issue plan for an acquisition program and to submit it to Headquarters Department of the Army for approval. It states that basis-of-issue plans are developed for new or improved items of equipment and are used to plan and manage the

introduction of developmental and nondevelopmental items of equipment. The materiel developer prepares and submits the basis-of-issue plan feeder data to initiate development of the basis-of-issue plan. In addition, basis-of-issue plans are source documents for changes to the table of organization and equipment. Further, Army Regulation 71-32 states that the basis-of-issue plan feeder data is a compilation of information about a new or improved item of equipment such as capabilities, intended use, basis of issue, and support requirements. The materiel developer summarizes information obtained from valid requirements and prepares and submits the basis-of-issue plan feeder data to the Army Force Management Support Agency to develop the basis-of-issue plan.

Army Regulation 71-32 requires the Army Force Management Support Agency to develop modification tables of organization and equipment by applying the appropriate incremental change packages and basis-of-issue plans to achieve a unit's level of modernization. The Army approved table of organization and equipment prescribes the unit organization, personnel, and equipment necessary to perform an assigned mission and requires Headquarters Department of the Army approval.

## **Generating Armor Requirements**

The Army Training and Doctrine Command validated a requirement for armor crew protection for the FMTV in the ORD for the Tactical Wheeled Vehicle Crew Protection Kit, January 19, 1996. As stated in the background section of this report, the Government Accountability Office reported that the Army developed the 1996 ORD for armor kits for tactical wheeled vehicles in response to Army operations in Haiti, Rwanda, and Somalia that exposed troops to threats from small arms fire, artillery and mortar fire, and mines. However, the need for armor kits after the operations in Somalia did not materialize until operations in Iraq. Army representatives stated that the Army did not fund or fill the armor kit requirements contained in the ORD because of other higher funding priorities in the Army.

The FMTV Joint Service Operational Requirement document, June 1991, was updated in 1997 and 2002 and reformatted as an ORD in 2003. The FMTV Joint Service Operational Requirement document and the ORD included crew protection against small arms fire and a 152-millimeter gun as an essential characteristic or objective requirement.

The Army filled theater commander urgent needs for armor kits for FMTVs to support the Global War on Terror by using the ONS process as a result of not having a program office to manage armor kit requirements for medium tactical vehicles. In December 2004, in recognition of the continuing need for armor kits, the Secretary of the Army established the Army Armor Task Force to provide increased management of the armoring effort. The Army Training and Doctrine Command developed the Army Tactical Wheeled Vehicle Long-Term Armoring Strategy (LTAS) in June 2005, to baseline armor requirements for tactical wheeled vehicles. In addition, the Army Training and Doctrine Command began preparing documentation for the

Joint Capabilities and Development System to update medium tactical vehicle armor kit requirements.

**Operational Needs Statements for Armor Kits.** The ONS process effectively identified, validated, and funded theater commander armor kit urgent needs. However, because the armor kits were funded through the ONS process, the contractor had to purchase lead-time materials and restart the production line to begin fulfilling theater commanders' urgent needs for armor kits. On January 29, 2007, the Army Deputy Chief of Staff, G-3/5/7, validated updated theater requirements for additional armor kits for medium tactical vehicles to support the surge of five Brigade Combat Teams into the Central Command area of responsibility.

To fully define the requirement for additional armor kits, the Army Deputy Chief of Staff, G-3/5/7, directed the Army Central Coalition Forces Land Component Command G-3 staff to submit an ONS no later than March 16, 2007, requesting validation of the quantities of armor kits needed. On February 2, 2007, the Army Central Coalition Forces Land Component Command G-3 staff submitted a consolidated ONS for \* armor kits for medium and heavy tactical vehicles, of which \* were for medium tactical vehicles, to support force adjustments in the Central Command area of responsibility. On August 16, 2007, the Army Deputy Chief of Staff, G-3/5/7, validated the consolidated ONS for a total of \* armor kits, of which \* armor kits for medium tactical vehicles.<sup>6</sup> As of August 2007, the total validated requirement for armor kits for medium tactical vehicles in Central Command area of responsibility was \*, of which \* <sup>7</sup> were for FMTVs and \* <sup>8</sup> were for the M900 series of medium tactical vehicles.

**Army Armor Task Force.** The Army formed the Army Armor Task Force in December 2004, to determine a comprehensive armoring strategy for all Army vehicles. A representative of the Army Deputy Chief of Staff, G-8, co-chair of the Army Armor Task Force, stated that the Army formed the Army Armor Task Force to address armor issues for tactical wheeled vehicles in support of Operation Iraqi Freedom and Operation Enduring Freedom. The mission of the Army Armor Task Force was to ensure that all Army activities were in sync and kept informed of requirements, resourcing solutions, and distribution schedules. The representative stated that after the initial armor requirements were met through the ONS process, the Army Armor Task Force discontinued meeting in September 2006. The representative further stated that the Army Armor Task Force reconvened in January 2007, when additional armor kit requirements were identified through the ONS process to support the troop level adjustments. As of

<sup>&</sup>lt;sup>6</sup> \* of the \* armor kits were for FMTVs; the remaining 8 armor kits were for the M900 series medium tactical vehicles. The remaining \* armor kits were for heavy tactical vehicles.

<sup>&</sup>lt;sup>7</sup> The March 2005 requirement of \* armor kits plus the August 16, 2007, requirement of \* armor kits for the FMTV equals the \* total armor kits.

<sup>&</sup>lt;sup>8</sup> The 2005 requirement of \* armor kits plus the August 16, 2007, requirement of \* armor kits for the M900 series of medium tactical vehicles equals the \* total armor kits.

<sup>\*</sup> For Official Use Only information omitted.

November 2007, the Army Armor Task Force was still reviewing strategies for the distributing of armor kits in the future but had yet to finalize or document a plan for the distribution of armor kits. To ensure the Army is ready for future operations, the Army Armor Task Force needs to finalize and document its plan for the distribution of armor kit requirements.

**Tactical Wheeled Vehicle Long-Term Armoring Strategy.** On June 1, 2005, the Capability Manager, Transportation at the Headquarters Army Training and Doctrine Command issued the LTAS. The LTAS established baseline requirements for the preinstalled armor components ('A' armor kits) and fixtures that will facilitate add-on armor ('B' armor kits) for tactical wheeled vehicles. To prepare the LTAS, the Capability Manager, Transportation used the Army Forces Generation Model to determine the number of 'A' and 'B' armor kits required for the future.<sup>9</sup> The results of the model indicated that the Army will need to procure enough 'B' armor kits to outfit approximately \* percent of the future modular tactical wheeled vehicle fleet to cover operational requirements, including Army pre-positioned stock unit sets, training requirements, exportable training capability, and spares. For the FMTV, the results of the model recommended that the Army procure a total of \* 'B' armor kits. The 'B' armor kits would be located at:

- contingency response units,
- all forward deterrence areas,
- Army pre-positioned stock locations,
- the Directorate of Logistics at unit home stations,
- the home station for local unit training,
- combat training centers,
- Army Materiel Command depots,
- mobilization sites and equipment concentration sites (Army Reserve), and
- maneuver area training equipment sites (National Guard).

However, the LTAS did not identify the number of FMTV 'B' armor kits that should be at each location.

\* \* \* \*

<sup>9</sup> 

<sup>\*</sup> For Official Use Only information omitted.

The Capability Manager, Transportation originally forwarded the LTAS for approval from Headquarters, Department of the Army through the Army Requirements and Resourcing Board. According to Headquarters, Department of the Army, G-8, representatives the LTAS should have been briefed with Headquarters, Department of the Army G-3/5/7, for approval. In addition, the Deputy Capability Manager, Transportation stated that the initial LTAS requirements are valid only until a formal requirements document is developed. In a January 10, 2008, memorandum, the Chief, Current and Future Warfighting Capabilities Division, stated that on December 11, 2007, the Army Resource and Requirements Board decided to procure \* LTAS B-armor kits to replace armor on all FMTVs currently in theater

Joint Capabilities Integration and Development System. As armor kit requirements grew in support of the Global War on Terror, the Army Training and Doctrine Command recognized the need to update armor kit requirements for medium tactical vehicles through the Joint Capabilities Integration and Development System. As stated in the Background section of the report, the primary objective of the Joint Capabilities Integration and Development System process is to ensure joint warfighters receive the capability required to successfully execute the missions assigned to them.

**Capability-Based Assessment Process.** In May 2005, the Army Training and Doctrine Command approved the Army Transportation functional area analysis and the following November, the Army Transportation Tactical Wheeled Vehicle functional needs analysis. In addition, the Army Combined Arms Support Command prepared a draft medium truck functional solutions analysis dated June 19, 2007. The draft recommended that the Army provide priority protection systems for medium trucks to include design and installation of 'A' and 'B' armor kits. In addition, the draft recommended that the Army include protection and survivability requirements in future capability production documents for the medium truck. Although the three analyses were prepared to support the development of a capability production document for the tactical wheeled vehicle crew and passenger protection kit, the analyses could support the preparation of either a capabilities development document or a capability production document.

**Draft Capability Production Document.** The Army Training and Doctrine Command Capability Manager, Transportation prepared a draft capability production document for the tactical wheeled vehicle crew and passenger protection kit dated April 26, 2007, to support a production decision for the kits. If approved, the capability production document would supersede the armor kit requirements in the 1996 ORD. The draft specified that all current and future tactical wheeled vehicles would be capable of accepting add-on armor solutions, but it did not require that all vehicles would be armored at all times. The draft established a requirement for two levels of protective kits, as called for in the armor strategy contained in the LTAS. In November 2007, the Deputy Capability Manager, Transportation stated that

<sup>\*</sup> For Official Use Only information omitted.

its staff stopped work on the draft capability production document for the tactical wheeled vehicle crew and passenger protection kit.

In November 2007, a representative for the Army Deputy Chief of Staff, G-8, stated that Army Training and Doctrine Command will incorporate armor requirements into existing medium tactical vehicle programs capability documents instead of establishing a new armor program for tactical wheeled vehicle crew and passenger protection kits. The Deputy Capability Manager, Transportation stated that current program requirements documents will be updated to incorporate armor protection. The Deputy Capability Manager also stated that the FMTV ORD can be updated for armor protection requirements and converted into a capabilities development document and a capability production document. Accordingly, the Army Training and Doctrine Command staff needs to update the FMTV ORD to incorporate current armor protection requirements and armor kit quantities.

## **Distribution of FMTV Armor Kits**

By not completing the Joint Capabilities Integration and Development System process, the Army did not timely complete actions to add armor kit requirements to the basis-of-issue plan and table of organization and equipment for FMTVs and complete an analysis for the future distribution of armor kits for medium tactical vehicles.

**Basis-of-Issue Plan Feeder Data.** Because the Army Training and Doctrine Command did not update requirements documents through the Joint Capabilities Integration and Development System, the Project Manager Tactical Vehicles could not take action to update the basis-of-issue plan feeder data to enable implementation of LTAS. The Army uses basis-ofissue plans to manage the introduction of items of equipment, by national stock numbers, issued to Army units. In April 2007, the Project Manager Tactical Vehicles stated that as a result of the LTAS, the program office will prepare an engineering change proposal upgrade for the FMTV and request a new line item number and national stock number for the FMTV. On May 30, 2007, the Transportation Branch Chief in the Office of the Army Deputy Chief of Staff, G-8, directed the Chief of Logistics for the Medium Branch in the Office of the Project Manager Tactical Vehicles to incorporate new line item numbers for medium tactical vehicles with the armor kits in the basisof-issue plan feeder data. New line item numbers for the FMTV 'A' armor kit vehicles and for FMTV 'B' armor kits are required because only some of the FMTVs would get 'B' armor kits. Further, the Transportation Branch Chief stated in the direction that if the FMTV with 'B' armor kits did not have their own line item number, they would be very difficult to track, account for, and maintain. Representatives for the Project Manager Tactical Vehicles stated that they cannot start the basis-of-issue plan until the Capability Manager, Transportation updates the FMTV capability document.

**Update of the Basis-of-Issue Plan and the Modification Table of Organization and Equipment.** Representatives from the U.S. Army Force Management Support Agency had not begun updating the basis-of-issue plan and modification table of organization and equipment for FMTV armor kits. In addition, the representatives stated that they planned to update the basis-of-issue plan and the modification table of organization and equipment for FMTVs with armor kits when they receive the basis-of-issue plan feeder data from the Project Manager Tactical Vehicles.

# Conclusion

The Army satisfied theater commanders' urgent needs for armor kits for FMTVs through the ONS process. However, the Army may not have had to rely on the ONS process had the Army funded, developed, tested, and fielded armor kit solutions in accordance with approved requirements in either the 1991 FMTV Joint Service ORD or the 1996 Tactical Wheeled Vehicle Crew Protection Kit ORD. Commanders could have adjusted numerical requirements as necessary to meet operational requirements and to modify ballistic protection requirements based on evolving threats. Accordingly, the Army needs to expedite the completion of the Joint Capabilities Integration and Development System documentation to address approved tactical wheeled vehicle capability gaps. Fulfilling the FMTV armor kit requirements in the Army Tactical Wheeled Vehicle LTAS and in the 2003 FMTV ORD is essential to making sure that theater commanders have sufficient armored FMTVs available at the start of future operations.

# Management Comments on the Report and Audit Response

Summaries of management comments on the report and audit responses are in Appendix C.

# Recommendations, Management Comments, and Audit Response

**Revised Recommendation.** In his comments on Recommendation 3. in the draft report, the Deputy Commander, U.S. Army Force Management Support Agency, responding for the Commander, U.S. Army Force Management Support Agency, stated that although the process to update the basis-of-issue plan was implicit in the recommendation, it should be rewritten to clarify the process for updating the basis-of-issue plans. We revised Recommendation 3. for clarity as the Deputy Commander suggested.

1. We recommend that the Commander, Army Training and Doctrine Command and the Army Deputy Chief of Staff, G-3/5/7, complete a capabilities development document or a capability production document for armor kit requirements for the Family of Medium Tactical Vehicles and submit it to the Joint Requirements Oversight Council for approval in accordance with Chairman of the Joint Chiefs of Staff Instruction 3170.01F, "Joint Capabilities Integration and Development System," May 1, 2007.

Army Training and Doctrine Command Comments. The Director, Internal Review and Audit Compliance, responding for the Commander, Army Training and Doctrine Command (the Command), concurred with the recommendation. She stated that the Command will include protection and armoring requirements in all tactical wheeled vehicle Joint Capabilities Integration and Development System documentation as part of the Command's Long-Term Protection Strategy. Further, the Director stated that the Command intends to convert the 2003 FMTV ORD into a capabilities development document and a subsequent capability production document that will include armoring and other protection requirements as part of the protection key performance parameter. In addition, she stated that the Long-Term Protection Strategy includes a schedule for updating these documents with FMTV armor requirements beginning in the fourth quarter of FY 2008. The Director stated that developing a separate capabilities development document or capability production document solely for FMTV armor kits would be duplicative. She stated that including protection in the base requirements document will result in more effective protection solutions and reduce the time needed to obtain approval from the Joint Requirements Oversight Council.

In addition, the Director stated that in January 2008, the Command's Army Capabilities Integration Center tasked the U.S. Army Combined Arms Support Command to develop an overarching Long-Term Protection Strategy for tactical wheeled vehicles that addresses doctrine, organization, training, materiel, leadership and education, personnel, and facilities. It will update the LTAS, to include addressing the logistics actions of handling, fielding, and storing armor B-kits. She also stated that the Long-Term Protection Strategy will convert "older" tactical wheeled vehicle requirements to Joint Capabilities Integration and Development System requirement documents for all tactical wheeled vehicle fleets. The Director stated that once completed, the Army Force Management Support Agency would be able to prepare basis-of-issue plans and update tables of organization and equipment. She stated that these actions will result in acquisition actions to procure armor kits for all tactical wheeled vehicles, to include the FMTV.

**Army Deputy Chief of Staff, G-3/5/7 Comments.** The Director, Capabilities Integration, Prioritization, and Analysis, responding for the Army Deputy Chief of Staff, G-3/5/7, concurred with the recommendation.

Audit Response. The Director, Internal Review and Audit Compliance comments and the Director, Capabilities Integration, Prioritization, and Analysis comments were responsive to the recommendation.

2. We recommend that the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) and the Army Deputy Chief of Staff, G-8; as Co-Chairs of the Army Armor Task Force, finalize their analysis and document distribution plans for armor kits for medium tactical vehicles identified in the Long-Term Armor Strategy and submit the results to the Army Deputy Chief of Staff, G-3/5/7, for validation in accordance with Army Regulation 70-1, "Army Acquisition Policy," December 31, 2003.

Assistant Secretary of the Army (Acquisition, Logistics, and Technology) Comments. The Deputy Director Soldier, Maneuver and Sustainment Systems, responding for the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) concurred with the recommendation. He stated that the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) would support the Army Deputy Chief of Staff, G-8, in developing distribution plans for the armor kits.

Army Deputy Chief of Staff, G-8, Comments. We did not receive comments on the draft report from the Army Deputy Chief of Staff, G-8.

**Audit Response.** The Deputy Director Soldier, Maneuver and Sustainment Systems comments were responsive to the recommendation and we do not require further comments from him. However, because we did not receive comments to the draft report from the Army Deputy Chief of Staff, G-8, we request that he provide comments to the final report by June 6, 2008.

**3.** We recommend that the Commander, Army Force Management Support Agency develop or update as required the basis-of-issue plans and applicable tables of organization and equipment for armor kits for medium tactical vehicles upon receipt of the complete basis-of-issue plan feeder data from the Project Manager Tactical Vehicles in accordance with Army Regulation 71-32, "Force Development and Documentation -Consolidated Policies," March 1997.

**Army Force Management Support Agency Comments.** The Deputy Commander, U.S. Army Force Management Support Agency concurred with the recommendation. However, he suggested that the recommendation be clarified to state that the U.S. Army Force Management Support Agency will develop or update as required the basis-of-issue plans and applicable tables of organization and equipment upon receipt of the complete basis-of-issue feeder data from the Project Manager Tactical Vehicles.

Audit Response. The Deputy Commander, U.S. Army Force Management Support Agency, comments were responsive to the recommendation and no further comments are required. We revised the recommendation for clarification as he suggested.

# **Appendix A. Scope and Methodology (U)**

We conducted this performance audit from March 2007 through January 2008 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 finding and conclusions based on our audit objectives.

We evaluated the process the Army used to determine current and future operational requirements for armored kits for the FMTVs and whether an adequate number of armor kits was procured to satisfy user requirements. In addition, we determined why the Army did not award contract orders for additional armor kits between September 2005 and February 2007.

We reviewed documentation and information dated from June 1991 through November 2007. Specifically, we reviewed the following:

- FMTV Joint Service Operational Requirement, June 1, 1991;
- ORD for the Tactical Wheeled Vehicle Crew Protection Kit, January 19, 1996;
- ORD for the FMTV, April 28, 2003;
- urgent needs statement for FMTV armor kits, October 14, 2003;
- ONSs for armor kits for medium tactical vehicles;
- contracts W56HZV-04-C-0297 and W56HZV-04-C-0321 with Radian Incorporated for armor kits for FMTVs;
- contracts 56HZV-04-C-0591, DAAE07-03-C-S023, and W56HZV-07-C-A500 with Stewart and Stevenson Tactical Vehicle Systems for FMTV LSACs;
- Army's Final Plan for Tactical Wheeled Vehicle Long Term Armoring Strategy, June 2005;
- draft tactical wheeled vehicle capability production document;
- Army Transportation Tactical Wheeled Vehicle Functional Area Analysis; May 24, 2005;
- Army Transportation Functional Needs Analysis, November 3, 2005;
- draft Medium Truck Functional Solutions Analysis, June 19, 2007; and
- a listing of armored medium tactical vehicles in the Central Command area of responsibility.

We also contacted staffs at Army Deputy Chief of Staff, G-3/5/7; Army Deputy Chief of Staff, G-8; Army Central Coalition Land Forces Component Command; Army Training and Doctrine Command; Army Armor Task Force; and Army Force Management Support Agency to obtain background information on armor kits, the process for determining and filling armor kit requirements, and the reason the Army did not contract for additional armor kits between September 2005 and February 2007. In addition, we contacted the Theater Property Book Officer to determine the number of armored medium tactical vehicles in the Central Command area of responsibility.

To accomplish the audit objectives, we reviewed:

- Chairman of the Joint Chiefs of Staff Instruction 3170.01F, "Joint Capabilities Integration and Development System," May 1, 2007, to determine the policies and procedures for the Joint Capabilities Integration and Development System process;
- Army Regulation 70-1, "Army Acquisition Policy," December 31, 2003, to determine Army acquisition policy that governs the acquisition of Army materiel to satisfy approved Army requirements;
- Army Regulation 71-9, "Materiel Requirements," April 30, 1997, to determine how the Army identifies and determines materiel warfighting requirements; and
- Army Regulation 71-32, "Force Development and Documentation -Consolidated Policies," March 3, 1997, to determine Army policies for development of the basis-of-issue plan and the table of organization and equipment.

**Use of Computer-Processed Data.** We did not use computer-processed data to perform this audit.

**Government Accountability Office High-Risk Area.** The Government Accountability Office has identified several high-risk areas in DoD. This report provides coverage of the DoD weapons system acquisition high-risk area.

# **Prior Coverage**

During the last 5 years, the Government Accountability Office and the Department of Defense Inspector General have issued two reports that discussed Army truck armor and family of medium tactical vehicle issues. Unrestricted Government Accountability Office reports can be accessed over the Internet at <u>http://www.gao.gov</u>. Unrestricted DoD Inspector General reports can be accessed over the Internet at <u>http://www.dodig.mil/audit/reports.</u>

# **Government Accountability Office**

Government Accountability Office Report No. GAO-06-160, "Defense Logistics: Several Factors Limited Production and Installation of Army Truck Armor during Current Wartime Operations," March 2006

# **DoD Inspector General**

DoD Inspector General Report No. D-2008-038, "The Army's Procurement and Conditional Acceptance of Medium Tactical Vehicles," December 21, 2007

# **Appendix B.** Glossary

**Army Armor Task Force.** The following personnel and organizations participate in the Army Armor Task Force:

- Deputy Chief of Staff, G-8, Focused Logistics Division, co-chair;
- Assistant Secretary of the Army (Acquisition, Logistics, and Technology), co-chair;
- Deputy Chief of Staff, G-3/5/7, Operations;
- Deputy Chief of Staff, G-4, Logistics;
- Army Materiel Command;
- Army Field Support Command;
- Army Central Coalition Forces Land Component Command;
- Army Forces Command;
- FMTV Program Manager; and
- Army Test and Evaluation Center.

**Basis-of-Issue Plan.** Basis-of-issue plans are requirements documents that state the planned placement of quantities of new equipment and associated support items of equipment and personnel. In addition, basis-of-issue plans identify mission essential wartime requirements for inclusion in organizations based on changes of doctrine, personnel, or materiel. They also are source documents for changes to the Army table of organization and equipment, Army table of distribution and allowances, and joint tables of allowances.

**Capabilities Development Document.** The capabilities development document is the sponsor's primary means of defining authoritative, measurable, and testable capability needed by the warfighter to support the system development and demonstration phase of an acquisition program. The capabilities development document captures the information necessary to deliver an affordable and supportable capability using mature technology within one or more increments of an acquisition strategy.

**Capability Production Document.** The capability production document captures the information necessary to support production, testing, and deployment of an affordable and supportable increment within an acquisition strategy. The capability production document provides the operational performance attributes necessary for the acquisition community to produce a single increment of a specific system. It presents performance attributes,

including key performance parameters, to guide the production and deployment of the increment.

**Crew and Passenger Protection Kit.** The crew and passenger protection kit is an armoring solution that provides tactical wheeled vehicles the capability to accept add-on armor solutions without needing to be fully armored all of the time. The crew and passenger protection kit involves the following two components.

- **'A' armor kits.** The 'A' armor kit includes the mounting provisions permanently integrated into the FMTV vehicle to support the installation of the 'B' armor kit. It also includes hard-to-install armor sections such as floor plates and firewalls. 'A' armor kits will be permanently installed at factories for new production FMTVs and at facilities recapitalizing existing FMTVs.
- **'B' armor kits.** The 'B' armor kit consists of the actual add-on armor modular components or panels. When the 'B' armor kit is no longer required on the tactical wheeled vehicle because of the mission or threat environment, it can be removed and stored for reuse. Future 'B' armor kit solutions are to be compatible with current 'A' armor kits to ensure seamless transition from one solution to another. The goal is to replace existing heavy metal armor with lighter weight materials such as ceramics and composites.

**Incremental Change Package.** An incremental change package is a doctrinally sound grouping of personnel and equipment change documents that are applied to a base or intermediate table of organization and equipment to form a new intermediate or objective table of organization and equipment.

**Modification Table of Organization and Equipment.** The modification table of organization and equipment is an authorization document that prescribes the modification of a basic table of organization and equipment necessary to adapt it to the needs of a specific unit or type of unit and to perform an assigned mission in a specific environment.

**Operational Needs Statement.** An ONS is used by field commanders to identify an urgent need for a materiel solution to correct a deficiency or to improve a capability that affects mission accomplishment. The Army Deputy Chief of Staff will determine the validity of the need, availability of technology, and source of resources to fill this requirement. Combat developers, training developers, and materiel developers review all ONSs to determine the applicability to future requirements or continuing need for which a capability document and acquisition is needed.

**Operational Requirements Document.** The operational requirements document is a formatted statement containing performance and related operational performance parameters for the proposed concept or system. The Joint Staff specified that operational requirements documents would be accepted for review until late December 2003. After this date, only operational requirements document updates/annexes, capability development documents and capability production documents developed in accordance with CJCSI 3170.01C will be accepted.

**Table of Organization and Equipment.** The table of organization and equipment is a document that prescribes the wartime mission, capabilities, and organizational equipment requirements for military units.

# Appendix C. Management Comments on Report and Audit Response

The Director, Capabilities Integration, Prioritization, and Analysis and the Director, Internal Review and Audit Compliance (Army Training and Doctrine Command) provided comments on the draft report. Summaries of those comments and our responses follow. The complete text of those comments is in the Management Comments section of this report.

# Management Comments on the Overall Report and Audit Response

The Director, Capabilities Integration, Prioritization, and Analysis commented on statements in the background section of the draft report. Specifically, he commented on paragraphs on "Joint Capabilities Integration and Development System" and "Additional Armor Kit Requirements to Support Force Adjustments in the Central Command Area of Responsibility."

**Comments on the Joint Capabilities Integration and Development System.** The Director, Capabilities Integration, Prioritization, and Analysis recommended that the paragraph describing the Joint Capabilities Integration and Development System include a synopsis of the information provided in Chairman of the Joint Chiefs of Staff Manual 3170.01C, May 1, 2007, Enclosure 1, paragraph 1.d. Paragraph 1.d states that the major outputs of a capabilities-based assessment are the functional area analysis to describe the mission area being assessed, the functional needs analysis to assess how well the current or programmed force performs that mission, and the functional solution analysis to analyze possible solutions to shortcomings in missionperformance.

**Audit Response.** We identified those major outputs of a capabilities assessment in the Finding section of the report.

**Comments on the Additional Armor Kit Requirements to Support Force Adjustments in the Central Command Area of Responsibility.** The Director commented that the numbers for armor kits and FMTVs in theater appear to be erroneous. The Director stated that, as of March 11, 2008, the Army Deputy Chief of Staff, G-3/5/7, had validated \* Radian Armor Cab Kits and Low Silhouette [Signature] Armor Cabs through two separate operational needs statements. In addition, he stated that the Army Deputy Chief of Staff, G-3/5/7; the Army Deputy Chief of Staff, G-8; and the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) have reported a total requirement of \* armor kits to replace all armor kits on FMTV (\*) and M939 series cargo trucks (\*) in theater with 'A' and 'B' armor kits. The Director stated that, as of March 11, 2008, the Army had

<sup>\*</sup> For Official Use Only information omitted.

shipped \* armor kits to theater. The Director provided two memorandums with his comments as the sources for the numbers he provided.

Audit Response. We met with the Director's suggested points of contact on March 31, 2008, to discuss the number of armor kits produced and the number of trucks in theater. At the meeting, agreement was reached that the users requested, in operational needs statements, \* armor kits to meet the requirements of the surge; however, the Chief, Future Warfighting Capabilities Division only validated a requirement for \* of the \* armor kits requested, to include \* for FMTV and \* for M900 series vehicles. Accordingly, we modified the report to state that the Army Deputy Chief of Staff, G-3/5/7, validated a need for \* armor kits.

The Director's points of contact agreed that the Army Deputy Chief of Staff, G-3/5/7, had validated a requirement for \* armored FMTV, instead of \*, and \* armored M900 series trucks for a total of \* armor kits. Because the points of contact agreed with those numbers as they appeared in the draft report, we did not change the report.

# Management Comments on the Finding and Audit Response

The Director, Capabilities Integration, Prioritization, and Analysis and the Director, Internal Review and Audit Compliance commented on the Operational Needs Statements for Armor Kits and the Conclusion paragraphs in the finding, respectively.

**Comments on the Operational Needs Statements for Armor Kits.** The Director, Capabilities Integration, Prioritization, and Analysis restated the comment that he made on the Background section of the report concerning the "Additional Armor Kit Requirements to Support Force Adjustments in the Central Command Area of Responsibility" paragraph.

Audit Response. Please see our response to the comments on "Additional Armor Kit Requirements to Support Force Adjustments in the Central Command Area of Responsibility."

**Comments on the Conclusion.** The Director, Internal Review and Audit Compliance recommended that the Conclusion paragraph be revised to read:

The Army satisfied theater commanders' urgent needs for armor kits for FMTVs through the ONS process. However, the Army would not have had to rely on the ONS process had the Army funded, developed, tested, and fielded armor kit solutions in accordance with approved requirements in either (1) The 1991 FMTV Joint Service Operational Requirement Document (ORD),

<sup>\*</sup> For Official Use Only information omitted.

or (2) The 1996 Tactical Wheeled Vehicle Crew Protection Kit (CPK) ORD. Numerical requirements could have been adjusted as necessary to meet operational requirements and ballistic protection requirements could have been modified base upon evolving threats. The Army needs to expedite the completion of the Joint Capabilities Integration and Development System documentation to address approved TWV [tactical wheeled vehicle] capability gaps. Fulfilling the FMTV armor kit requirements in the Army Tactical Wheeled Vehicle Long Term Armoring Strategy (LTAS) and in the 2003 FMTV ORD is essential to making sure that theater commanders have sufficient armored FMTVs available at the start of future operations.

In January 2008, the Army's Training and Doctrine Command (TRADOC) Army Capabilities Integration Center (ARCIC) tasked the U.S. Army Combined Arms Support Command (CASCOM) to develop an overarching Long Term Protection Strategy (LTPS) for tactical wheeled vehicles that addresses doctrine, organization, training, materiel, leadership and education, personnel, and facilities. It will update the Long Term Armor Strategy, to include addressing the logistics actions of handling, fielding, and storing armor B-kits. The LTPS will also convert "older" TWV requirements (e.g., ROCs [Required Operational Capability], ORDs), to JCIDS requirement documents for all TWV fleets as required. Once completed, the Army Force Management Support Agency will be able to prepare basis-of-issue plans and update Tables of Organization and Equipment (TOE). These actions will result in acquisition actions to procure armor kits for all TWV, to include FMTV.

Audit Response. We modified the Conclusion paragraph to meet the intent of the Director's recommended changes.

# **Appendix D. Report Distribution**

# **Office of the Secretary of Defense**

Under Secretary of Defense for Acquisition, Technology, and Logistics
 Under Secretary of Defense (Comptroller)/Chief Financial Officer
 Deputy Chief Financial Officer
 Deputy Comptroller (Program/Budget)
 Director, Program Analysis and Evaluation

# **Department of the Army**

Auditor General, Department of the Army

# **Department of the Navy**

Auditor General, Department of the Navy

# **Department of the Air Force**

Auditor General, Department of the Air Force

### **Non-Defense Federal Organization**

Office of Management and Budget

# Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations Senate Subcommittee on Defense, Committee on Appropriations Senate Committee on Armed Services Senate Committee on Homeland Security and Governmental Affairs House Committee on Appropriations House Subcommittee on Defense, Committee on Appropriations House Committee on Armed Services House Committee on Oversight and Government Reform House Subcommittee on Government Management, Organization, and Procurement, Committee on Oversight and Government Reform House Subcommittee on National Security and Foreign Affairs, Committee on Oversight and Government Reform

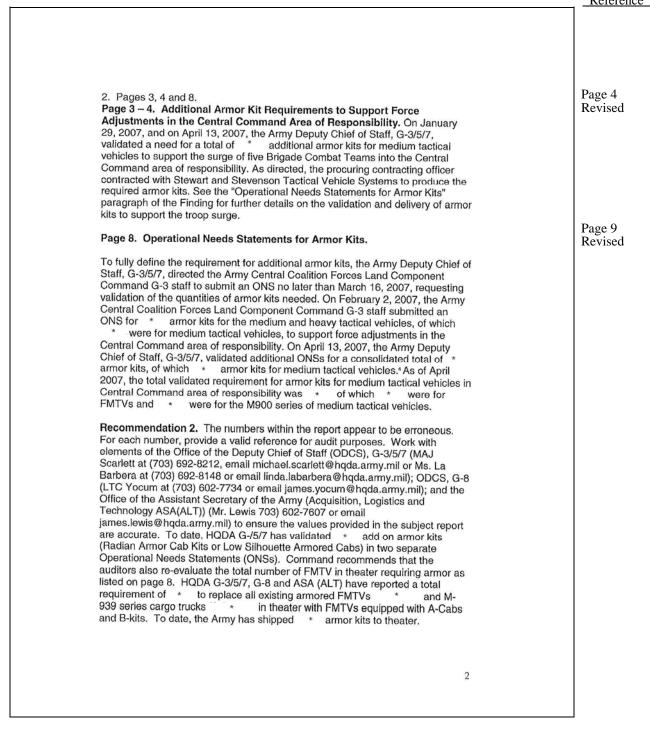
# U.S. Army Deputy Chief of Staff, G-3/5/7 Comments

REPLY TO	DEPARTMENT OF THE ARMY OFFICE OF THE DEPUTY CHIEF OF STAFF, G-3/5/7 400 ARMY PENTAGON WASHINGTON, DC 20310-0400
DAMO-CI	MAR 1 1 2008
MEMORANDUM FOR IN 400 ARMY NAVY DRIVE	SPECTOR GENERAL, DEPARTMENT OF DEFENSE, , ARLINGTON, VA 22202-4704
SUBJECT: DODIG Draft Medium Tactical Vehicles	Report on Planning for Armor Requirements for the Family of (Project No. D2006-D000AE-0225.001)
1. Reference memorandu	um DODIG, February 11, 2008, with SAB.
	ity Chief of Staff (ODCS), G-3/5/7 reviewed the subject report. ne recommendations and provides comments for your
3. The DCS, G-3/5/7 resp G-3/5/7's point of contact	conse represents the Official Army Position for subject report. for this action is Ms. Linda La Barbera at (703) 692-8148.
	David Marbourt
Encls	DR. DAVID M. MARKOWITZ Director, Capabilities Integration, Prioritization, and Analysis



Kelefence		
Revised	<section-header><section-header><section-header><section-header><text><text><text><list-item><list-item><list-item><list-item><list-item><list-item></list-item></list-item></list-item></list-item></list-item></list-item></text></text></text></section-header></section-header></section-header></section-header>	

Final Report Reference



<sup>&</sup>lt;sup>\*</sup> For Official Use Only information omitted.

(G)	DEPARTMENT OF THE A OFFICE OF THE DEPUTY CHIEF OF STAI 400 ARMY PENTAGON WASHINGTON, DC 20010-0400	F. G-3/5/7
DAMO-CIC		16 August 2007
MEMORAND Land Compor	UM FOR Commander, Third Army, U.S. A nent Command, 1881 Hardee Avenue, Ft N	my Central, Coalition Forces
SUBJECT: A on-Armor (Ao	ddition to USARCENT Operational Needs A) Kits to Support Force Adjustments in th ( (AOR) (HQDA ONS 07-1626)	
1. Reference Operational N Adjustments ir	memorandum, HQDA, dated 13 April 2007 leeds Statement for Additional Add-on-Arm n the USCENTCOM Area of Responsibility	7, Subject: USARCENT or (AoA) Kits to Support Force (AOR).
2. HQDA G-3/ Requirements	/5/7 has reviewed the addition to the refere and Resourcing Board decision on 19 July WVs is validated per table below.	
	validated requirement for CENTCOM AOR	is.
	* * * *	
<ol> <li>ARCENT in sustainment, ar for additional pr</li> </ol>	curs responsibility for all funding related to nd property accountability. This validation rersonnel.	training, maintenance, does not include authorization

<sup>\*</sup> For Official Use Only information omitted.

DAMO-CIC SUBJECT: Addition to USARCENT Operational Needs Statement for Additional Add-on-Armor (AoA) 5. The HQDA G-3/5/7 point of contact for this action is MAJ Mike Scarlett, DAMO-CIC, DSN 222-8212, comm: (703) 692-8212: (SIPR) michael.scarlett@hqda-s.army.smil.mil. STEVENA. SLIWA COL/BS Chief, Future Wartighting Capabilities Division 2

	DEPARTMENT OF THE ARMY OFFICE OF THE DEPUTY CHIEF OF STAFF, G-35/7 400 AWAY PENTAGON WASSINGTON, DC 20310-0400
DAMO-CIC	30 April 200
MEMORANDUM F0 1881 Hardee Avenu	OR Commander, Coalition Forces Land Component Command, ue, Ft McPherson, GA 30330-1064
SUBJECT: Tactical	Wheeled Vehicle Risk Mitigation Initiatives
1. Beference Army Steering Committee	Resource and Requirements Board (AR2B) General Officer e decision of 7 December 2007.
<ol> <li>HQDA, G-3/5/71 Mitigation Initiatives</li> </ol>	has reviewed and validates the Tactical Wheeled Vehicle Risk s IAW the AR2B decision referenced above.
<ol> <li>OASA(ALT) will enhancement kits:</li> </ol>	direct PEO CS&CSS to procure and install the following armor
a. Appliqué kits l Vehicles:	to increase current AoA kit protection on Medium and Heavy Tactica
	* kits 5: * ∐kits_
b. * LSAC t	to replace RACKs to increase current FMTV protection level.
c. * ASV Fr increase protection	rag Kit #1s (wheel well) and * Frag Kit #2s (underbody) to level in vulnerable areas of the vehicle.
DSN 222-8213, cor	3/5/7 point of contact for this action is MAd Doug Cherry, DAMO-CIC mm: (703) 692-8213, or (SIPR) gda-s.army.smil.mil. STEVEN A. SLIWA COL, GS Chief, Future Warfighting Capabilities Division
CF: Deputy Chief of Sta Assistant Secretary	aff. G-8 (DAPR-FDL) y of the Army (Acquisition, Logistics and Technology) (SAAL-SMS)

<sup>\*</sup> For Official Use Only information omitted.

### **Assistant Secretary of the Army (Acquisition, Logistics, and Technology) Comments**



DEPARTMENT OF THE ARMY OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY ACQUISITION LOGISTICS AND TECHNOLOGY 103 ARMY PENTAGON WASHINGTON DC 20310-0103

SAAL-SMS

11 March 2008

MEMORANDUM FOR US ARMY AUDIT AGENCY, ATTN: SAAG-PMO-L, 3101 PARK CENTER DRIVE, ALEXANDRIA, VA 22302

SUBJECT: DODIG Draft Report – Planning Armor Requirements for the Family of Medium Tactical Vehicles (D2006AE-0225.001)

Thank you for the opportunity to comment on the subject draft report. The report recommends that the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (ASA(ALT) and the Army Deputy Chief of Staff, G-8; as Co-Chairs of the Army Armor Task Force, finalize their analysis and document distribution plans for armor kits for medium tactical vehicles identified in the Long-Term Armor Strategy and submit the results to the Army Deputy Chief of Staff, G-3/5/7, for validation in accordance with Army Regulation 70-1, "Army Acquisition Policy," December 31, 2003. ASA(ALT) will support G-8 in the development of distribution plans for the armor kits.

Point of contact is Jose A. Rivera Cotto, 602-7593, or e-mail: jose.rivera@ saalt.army.mil.

Stephen L. Rann Deputy Director Soldier, Maneuver and Sustainment Systems

#### **U.S. Army Training and Doctrine Command Comments**

DEPARTMENT OF THE ARMY HEADQUARTERS, UNITED STATES ARMY TRAINING AND DOCTRINE COMMAND 102 MCNAIR DRIVE FORT MONROE, VIRGINIA 23651-1047 REPLY TO ATTENTION OF ATIR 14 March 2008 MEMORANDUM FOR Inspector General, Department of Defense, 400 Army Navy Drive, Arlington, VA 22202-4704 SUBJECT: Command Comment to Draft Report - Planning Armor Requirements for the Family of Medium Tactical Vehicles (Project No. D2006-D000AE-0225.001) 1. HQ TRADOC comments to the subject draft report are enclosed. We concur with comment to recommendation 1 as addressed to Commander, Army Training and Doctrine Command and the Army Deputy Chief of Staff, G-3/5/7. In addition, we recommend inclusion of recent developments and changes to the conclusion (amending the report as necessary). Point of contact is Ms. Sheryl Lembcke, DSN 680-2883. 2. FOR THE COMMANDER: Encl KIMBERLY DAWN CYR Director, Internal Review And Audit Compliance

#### Final Report Reference



requirements could have been modified based upon evolving The Army needs to expedite the completion of the Joint threats. Capabilities Integration and Development System documentation to address approved TWV capability gaps. Fulfilling the FMTV armor kit requirements in the Army Tactical Wheeled Vehicle Long Term Armoring Strategy (LTAS) and in the 2003 FMTV ORD is essential to making sure that theater commanders have sufficient armored FMTVs available at the start of future operations. In January 2008, the Army's Training and Doctrine Command (TRADOC) Army Capabilities Integration Center (ARCIC) tasked the US Army Combined Arms Support Command (CASCOM) to develop an overarching Long Term Protection Strategy (LTPS) for tactical wheeled vehicles that addresses doctrine, organization, training, materiel, leadership and education, personnel, and facilities. It will update the Long Term Armoring Strategy, to include addressing the logistics actions of handling, fielding, and storing armor B-kits. The LTPS will also convert "older" TWV requirements documents (e.g., ROCs, ORDs), to JCIDS requirement documents for all TWV fleets as required. Once completed, the Army Force Management Support Agency will be able to prepare basis-of-issue plans and update Tables of Organization and Equipment (TOE). These actions will result in acquisition actions to procure armor kits for all TWV, to include FMTV. DODIG Recommendation 1: We recommend that the Commander, Army Training and Doctrine Command and the Army Deputy Chief of Staff, G-3/5/7, complete a capabilities development document or a capability production document for armor kit requirements for the Family of Medium Tactical Vehicles and submit it to the Joint Requirements Oversight Council for approval in accordance with Chairman of the Joint Chiefs of Staff Instruction 3170.01F, "Joint Capabilities Integration and Development System," May 1, 2007. TRADOC Response: Concur with comment. TRADOC will include protection and armoring requirements in all TWV JCIDS requirements documents as part of TRADOC's Long Term Protection Strategy (LTPS). TRADOC intends to convert the 2003 FMTV ORD (and other TWV requirements documents) into a CDD and subsequent CPD that will include armoring and other protection requirements as part of the Protection KPP. The LTPS includes a schedule for updating these documents with the FMTV beginning 4QTR08. Developing a separate CDD or CPD solely for FMTV armor kits would be duplicative. Including protection in the base requirements document will result in more effective protection solutions and reduce the time necessary to obtain JROC approval.

# **U.S. Army Force Management Support Agency Comments**

Final Report

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	MEMORANDU	IM FOR RECORD				
		MO-ZXS Control ID 80314296				
		ion #3 of DODIG Draft Report # for the Family of Medium Tactic		ning Armor		
	1 Subject tas	ker required the US Army Force	Management Support Age	ncy as the		
	DAMO-FM lead	d, to provide comment on the fo	blowing recommendation as	s stated on		
	page 12 of the	draft subject report:				
		ommend that the Commander, A				Revised
		sis-of-issue plan and table of org tical vehicles after the Project N				
	basis-of-issue	plan feeder data in accordance	with Army Regulation 71-32	2, "Force		
	Development a	and Documentation Consolida	ated Policies," March 1997."	22		
	2. Concur with	ocomment. Page 11 of the drai	ft report states, "Because th	e Army		Page 12
8		es Integration and Developmen				
		not take actions to update the I n of LTAS" (sic Long-Term Arms				
		Support Agency (USAFMSA) an				
		BOIPFD) for the Family of Media IPFD for the armor kits as a res				
	BOIPFD, USA	FMSA will develop the appropria	ate BOIP requirements doc	uments and		
		proval within 120 days. Althoug on, for clarity, USAFMSA reque				
	follows:	on, for clarity, OOAr MOA reque	sis recommendation #5 be	re-written as		
	We recomm	nend that the Commander, Arm	v Force Management Supp	ort Agency		
	develop, or up	date as required, the basis-of-is	sue plans and applicable ta	bles of		
13	data from the f	nd equipment upon receipt of th Project Manager Tactical Vehicl	e complete basis-of-issue p es as delineated in Army Re	olan feeder		
		Development and Documentation				
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SUBJECT: DAMO-ZXS Control ID 80314296, Request for Comment on Recommendation #3 of DODIG Draft Report # D2006AE-0225.001, Planning Armor Requirements for the Family of Medium Tactical Vehicles 3. Point of contact for this action is Mr. Christopher Garito at COMM 703-805-4189, DSN 655-4189 or Christopher.m.garito@us.army.mil. GERALD B. O'KEEFE COL, EN Deputy Commander USAFMSA 2

#### **Team Members**

The Department of Defense Office of the Deputy Inspector General for Auditing, Acquisition and Contract Management produced this report. Personnel from the Technical Assessment Directorate and Quantitative Methods Directorate, Department of Defense Office of Inspector General, also contributed to the report. Those personnel are listed below.

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#### Report No. D-2008-089

May 9, 2008



## Inspector General Department of Defense