DEPARTMENT OF DEFENSE

JOINT AUDIT REPORT

MISSION ESSENTIALITY CODING

Report No. 97-086

February 3, 1997

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Acronyms

DLA	Defense Logistics Agency
MME	Military Mission Essentiality

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February 3, 1997

MEMORANDUM FOR DEPUTY UNDER SECRETARY OF DEFENSE (LOGISTICS)
DIRECTOR, DEFENSE LOGISTICS AGENCY

SUBJECT: Audit Report on Mission Essentiality Coding (Report No. 97- 086)

We are providing this audit report for information and use. This joint audit was coordinated by the DoD Joint Logistics Audit Planning Group, and conducted by team members from the DoD Inspector General, Army, Navy, and Air Force audit organizations.

Management comments on a draft of this report were considered in preparing this final report. The submitted comments conformed to requirements of DoD Directive 7650.3 and indicated concurrence with the recommendations in the draft report. Therefore, no additional comments are required.

We appreciate the courtesies extended to the audit team. Questions on the audit should be directed to Ms. Barbara M. Cobble, Naval Audit Service, at (703) 604-2027 (DSN 664-2027), or Mr. Terrance P. Wing of my office, at (215) 737-3883 (DSN 444-3883). See Appendix H for the report distribution. The audit team members are listed in the inside back cover.

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Assistant Inspector General
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Office of the Inspector General, DoD

Report No. 97-086 **February 3, 1997**
(Project No. 5LD-9016)

Mission Essentiality Coding

Executive Summary

Introduction. A secondary item (reparable component, minor end item, and repair part) whose failure renders the supported end item or weapons system inoperable is considered an essential item. DoD Regulation 4140.1-R, "DoD Materiel Management Regulation," provides DoD policy, establishes a uniform essentiality coding structure, and requires that the degree of essentiality of an item be a factor in the requirements computation methodology. The policy further states that DoD Components shall allocate resources and vary the intensity of management for each item based on the assigned military mission essentiality code.

Objectives. The objectives of the audit were to evaluate procedures for assigning and managing mission essentiality codes and assess compliance with DoD policy; evaluate accuracy of recorded codes in DoD Component data systems; evaluate compatibility of codes among DoD Components; evaluate uses of essentiality codes in current systems and in proposed standard systems; and determine the effectiveness of applicable internal controls.

We did not evaluate the uses of essentiality codes in proposed standard systems because of the Joint Logistics Systems Center's decision not to deploy a standard materiel management system. DoD Components will have the option to use any proposed applications that may be deployed, and to customize them to meet their particular requirements.

This joint audit was coordinated by the DoD Joint Logistics Audit Planning Group, and conducted by team members from the DoD Inspector General and Army, Navy, and Air Force audit organizations.

Audit Results. Policies and procedures for assigning, using, reviewing, and communicating essentiality codes were not effective. As a result, 246 of the 758 items reviewed on 10 weapons systems had inaccurate essentiality codes. Materiel managers could not ensure that stockage decisions or inventory purchases targeted the appropriate mix of items and that weapons systems of equal military significance received equal support. Thus, there was no assurance that weapons systems' readiness objectives could be achieved at the least cost and with optimal support.

Summary of Recommendations. We recommend that the Deputy Under Secretary of Defense (Logistics) develop standard criteria for use by the Military Departments to assign and review essentiality codes; clarify the objectives of essentiality codes and specify how DoD Components should use essentiality codes in supply management systems; revise DoD Regulation 4140.1-R to require DoD Components to establish improved procedures and controls; and direct the Military Departments to establish procedures to communicate essentiality codes to all DoD Integrated Managers. We also recommend that the Director, Defense Logistics Agency develop a consistent policy for supply support of Weapons Systems Support Program items.

Management Comments. The Deputy Under Secretary of Defense (Logistics) generally concurred with the recommendations. The Deputy Under Secretary is establishing a DoD Working Group, which will use the recommendations as a baseline to develop standard criteria and policy changes. The estimated completion date is July 1997. The Director, Defense Logistics Agency concurred with the recommendation and is developing a standardized inventory investment strategy. Initial implementation was expected by January 31, 1997. See Part I for a summary of management comments, and Part III for a complete text of management comments.

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Part I - Audit Results

Audit Background

A secondary item (reparable component, minor end item, and repair part) whose failure renders the supported end item or weapons system inoperable is considered an essential item. DoD Regulation 4140.1-R, "DoD Materiel Management Regulation," (DoD 4140.1-R), January 1993, requires that the degree of essentiality of the item be a factor in the requirements computation methodology. The requirements computation is used to determine stockage objective quantities for secondary items of supply.

In June 1985, the Secretary of Defense approved the Secondary Item Weapons System Management Concept for managing secondary items on a weapons system basis. The goal of weapons system management is to improve materiel readiness and to sustain combat forces more effectively. The Concept recognized that implementation of the weapons system management approach would be a long range, incremental effort that, when fully implemented in as late as 2005, should focus management attention and resources on items enhancing end item readiness.

DoD 4140.1-R established a uniform essentiality coding structure that requires assignment of a Military Mission Essentiality (MME) Code. The MME Code is determined by assessing the degree of essentiality based on the hierarchical relationship of the part to the assembly, the assembly to the weapons system, and the weapons system to the military mission of the using activity. MME Codes range from most essential, highly essential, less essential, or not essential to military mission. The Regulation further provides that DoD Components (such as the Military Departments and the Defense Logistics Agency [DLA]) shall allocate management resources and vary the intensity of management for each item based on the assigned MME Code.

Determination of essentiality codes requires a technical judgment by an engineer or equipment specialist who is capable of deciding the degree to which an item is required for operation of an assembly and/or weapons system. During initial provisioning of weapons systems, Military Departments make this determination and use it in conjunction with other technical information to make secondary item stockage decisions. During FY 1997, DoD plans to invest $18.9 billion in initial and replenishment spare and repair parts.

Audit Objectives

The objectives of the audit were to:

- Evaluate procedures for assigning and managing mission essentiality codes and assess compliance with DoD policy.
- Evaluate accuracy of recorded codes in DoD Component data systems.
- Evaluate compatibility of codes among DoD Components.
- Evaluate uses of essentiality codes in current systems and in proposed standard systems.
- Determine the effectiveness of applicable internal controls.

We did not evaluate the uses of essentiality codes in proposed standard systems because of the Joint Logistics Systems Center's decision not to deploy a standard materiel management system. DoD Components will have the option to use any proposed applications that may be deployed, and to customize them to meet their particular requirements.

Appendix A of this report provides details on our audit process, including our scope and methodology as well as our evaluation of the Management Control Program. Appendix B provides a summary of related prior audits.

Other Matters of Interest

Currently there are three other reviews of essentiality codes being conducted:

- On February 7, 1996, the Army Materiel Command chartered a team to examine the validity of specific data elements input into various math models used in stockage determination decisions. The team is empowered to direct changes where needed and implement improvements to policy where required. One of the data elements being evaluated is essentiality codes. The review of essentiality codes was completed in August 1996 with no significant policy changes to the coding system. However, during this examination, another team was formed to review the essentiality coding process. A final report was issued in November 1996, recommending policy and process changes.

- In January 1996, the Naval Inventory Control Point formed a group to review essentiality coding at its Philadelphia, Pennsylvania and Mechanicsburg, Pennsylvania locations. The overall goal of the working group is to ensure consistent use of Item Mission Essentiality Codes at both locations. Recommendations of the group will apply to essentiality codes passed to DLA as well as internal uses of the codes. The group's estimated completion date is April 1997.

Essentiality Coding

Policies and procedures for assigning, using, reviewing, and communicating essentiality codes were not effective. This occurred because:

- Military Departments did not comply with the standardized essentiality coding structure when assigning codes.
- DoD policy for assigning essentiality codes was definitional in nature and did not offer specific criteria for assigning individual codes.
- Essentiality codes were not consistently used by the various DoD Components for materiel management decisions.
- Controls were not adequate to ensure that essentiality codes were current and that using activities communicated essentiality codes to activities managing the items.

As a result, 246 of the 758 items reviewed for 10 weapons systems had incorrect essentiality codes. Materiel managers could not ensure that either stockage decisions or inventory purchases targeted the appropriate mix of items or that weapons systems of equal military significance received equal support. Thus, there was no assurance that weapons systems' readiness objectives could be achieved at the least cost and with optimal support.

Policies and Procedures

DoD 4140.1-R requires Military Departments to assign essentiality codes to weapons systems' secondary items of supply. Essentiality codes are to be determined by analyzing part, assembly, and weapons system relationships, with corresponding essentiality codes maintained in the Military Departments' weapons systems applications files (see Appendix C for DoD's essentiality coding matrix). The Regulation further requires the assignment of an MME code, which introduces the degree of essentiality of the part, assembly, and weapons system to the military mission of the using activity. Military Departments are to periodically review assignment of essentiality codes to ensure they reflect the current status of items. Ultimately, essentiality codes should reflect the mission impact resulting from failure of a part or assembly.

DoD 4140.1-R also identifies how essentiality codes should be used in logistics operations. In general, the essentiality codes are to be used for:

(1) Relating range and depth of stock (refers to number of items and quantities) to weapons system availability.
(2) Allocating resources and varying item management intensity.
(3) Communicating essentiality information among activities.
(4) Selecting and approving items for non-demand-supported stockage.
(5) Differentiating among degrees of essentiality for Readiness-Based Sparing Models. (Such models establish an optimum range and quantity of spares and repair parts at all stockage and user locations in order to meet approved, quantifiable, weapons system readiness, operational availability, or fully mission-capable objectives.)

Military Standard 1388-2B, "DoD Requirements for a Logistics Support Analysis Record," March 28, 1991, required contractor development of essentiality codes for all piece parts and assemblies included on weapons systems. The purpose was to indicate the degree to which failure of each part would affect operation of the end item. Because of the Office of Secretary of Defense Acquisition Reform and the Specifications and Standards Reform Initiative, the standard was replaced by a Performance Specification, entitled, "Logistics Management Information," November 11, 1996, which contains the same essentiality code definitions as the standard.

The DLA established the Weapons Systems Support Program in the mid 1980s to enhance weapons system readiness and sustainability by providing enhanced support for DLA-managed items with weapons systems applications. DLA manages the majority of repair parts used on weapons systems. Military Departments transfer essentiality codes to DLA on weapons system items and DLA uses the essentiality codes for stockage decisions. DLA procedures provide that the Military Departments annually reconcile weapons system data passed to DLA to ensure that the data are current and accurate.

Effectiveness of Essentiality Coding

DoD did not have effective policies and procedures for assigning essentiality codes. Furthermore, DoD Components did not consistently use the codes that were assigned. The Military Departments did not sufficiently review the status of items to determine the accuracy of codes, and did not sufficiently communicate essentiality code information.

Assignment of Codes. DoD policies and procedures for assigning essentiality codes were not effective. While each Department used the same overall essentiality code definitions, criteria for assigning individual item codes differed broadly among the Military Departments. In fact, engineers and equipment specialists often just used judgment. Therefore, resulting item essentiality codes (1, 3, 5, 6, or 7) were not compatible among the Military Departments. DoD 4140.1-R and Military Standard 1388-2B provide definitions for the codes, as follows, but neither provides specifics on how the definitions are to be applied.

> Code 1. Failure of this part will render the end item inoperable.
> Code 3. Failure of this part will not render the end item inoperable.
> Code 5. Item does not qualify for Code 1, but is needed for personal safety.
> Code 6. Item does not qualify for Code 1, but is needed for legal, climatic, or other requirements peculiar to the end item's planned operational environment.
> Code 7. Item does not qualify for Code 1, but is needed to prevent the impairment of, or the temporary reduction of, operational effectiveness of the end item.

We reviewed and evaluated procedures used by the Military Departments to assign and maintain essentiality codes for secondary items associated with 10 weapons systems. We obtained technical justifications for essentiality codes assigned to a sample of individual items for each weapons system. Our review also included a comparison of codes assigned to sample items used by more than one Service. Those sample items were used on either the same or similar weapons systems reviewed. Appendix D describes the sample selection and shows the weapons systems reviewed, sample sizes, and number of common sample items among the systems reviewed.

Coding Structure. The Military Departments did not comply with the standardized essentiality coding structure specified in DoD 4140.1-R. Essentiality code structures differed widely, ranging from single digit-single indenture (part level) codes to three digit-multiple indenture (part/assembly/weapons system level) codes. Essentiality codes were inconsistent at the part level because the Military Departments used differing assignment criteria. None of the Military Departments assigned MME codes. They relied on the Materiel Management Standard System implementation to provide coding structures that complied with DoD 4140.1-R policies. The Materiel Management Standard System, under development by the Joint Logistics Systems Center consists of 10 materiel management applications. These applications were to be integrated into a single DoD standard system for material management. However, as previously stated, the DoD standard system will not be deployed. Each DoD Component will have the option to use any

proposed application. We are not making a recommendation on the coding structure because, even if it was consistently applied, resulting codes would have been inconsistent because of inadequate criteria for assigning essentiality codes.

Criteria Comparisons. DoD policy did not provide specific criteria (conditions or sets of conditions that would require specific code assignment) for the assignment of essentiality codes. In general, Military Departments assign essentiality codes during initial provisioning of weapons systems. Weapons system contractors recommend essentiality codes as part of the Logistics Support Analysis Record delivered to the Military Departments. Engineers and equipment specialists review the engineering codes and decide whether to accept or change the contractor recommendations. However, the definitions of codes and absence of assignment criteria required subjective decisions by engineers and contractors. Codes developed were "engineering" codes and were not always suited to the intended uses of essentiality codes as specified in DoD 4140.1-R. For example, engineering codes indicate that an anchor is essential for a ship's operation, but anchors rarely fail. Therefore, the engineering essentiality code alone, without consideration of other criteria, is not suitable for supply management decisions. The criteria that we identified as being used by engineers and equipment specialists for assigning essentiality codes varied by Military Department. Table 1 provides the prioritized criteria. Because the Navy manages aviation (AIR) and ships (SEA) parts separately, they are generally shown separately in Table 1 and other tables.

Table 1: Comparison of Essentiality Criteria

Criteria	Army	Navy AIR	Navy SEA	Air Force	Marine Corps
Maintenance Level	X	X	X		
Maintenance Replacement Factor		X			
Concurrent Replacement			X		
Redundancy of Function			X		
Common Hardware	X				
Default Codes		X	X		
Foreign Military Sales				X	
Personal Judgment	X	X	X	X	X

Maintenance Level. Generally, items replaced at the organizational (user or unit) level received higher essentiality codes than items replaced only during depot maintenance (overhaul), since they were considered to contribute more directly to operational readiness. In addition, other mechanisms are available to forecast requirements for items replaced only during depot maintenance. For instance, in July 1996, the U.S. Army Tank-Automotive and Armaments Command recognized the need for standard assignment criteria, and established a policy that formalized level of maintenance as a criterion for assigning codes to repair parts. However, not all equipment specialists considered maintenance level an important criterion.

Maintenance Replacement Factor (Likelihood of Failure). Guidance for Naval aviation items included maintenance replacement factor as a criterion. If replacement factors for individual items were zeroes (items not expected to fail), the guidance permitted non-essential codes.

Concurrent Replacement. Concurrent replacement items themselves are not expected to fail, but must be replaced along with an assembly that fails. Some guidance reviewed required that concurrent replacement items have the same essentiality code as their next higher assemblies. Examples include gaskets and bearings.

Redundancy of Function. Guidance used by some equipment specialists identified redundancy of function as criteria for reducing essentiality codes. If backup systems exist to continue operations in case of system failure, then overall system essentiality should be reduced accordingly.

Common Hardware. Assignment of codes to common hardware items generally was a subjective decision by engineers or equipment specialists. Within DLA's Weapons Systems Support Program, 33 percent of the 7.1 million applications recorded were used on 20 or more separate weapons systems. Widely used items are more likely to have stable demand patterns and therefore should be coded essential by exception only.

Default Codes. Systems for recording and maintaining essentiality codes at the Navy's two inventory control point locations contained provisions for default essentiality codes if data were missing or incorrect. For provisioning computations relating to ships parts, the default value for essentiality code was "essential." For aviation parts, the default value for essentiality code was "non-essential." Using default values of "non-essential" allows managers to focus resources on the vital parts. Subsequent to our audit field work, the default for the codes for ships parts was revised to "non-essential."

Foreign Military Sales. Air Force essentiality coding structure provides a separate designation for items that apply only to Foreign Military Sales accounts. This designation is the lowest priority essentiality code in the Air Force system.

Personal Judgment. Engineers and equipment specialists within the Military Departments consistently relied upon their experience and professional opinions when assigning and reviewing essentiality codes.

Code Conversions. Because DoD policy did not provide specific criteria, essentiality codes were not compatible among the Military Departments, and each Military Department had noncompatible procedures to convert essentiality codes for internal purposes and transmission to DLA. Appendix E shows the Military Departments' conversion criteria. Using inconsistent, subjective criteria for assigning essentiality codes caused the resulting codes to have different definitions among the Military Departments. These inconsistencies are of particular significance when codes are transferred to DLA because DLA uses the codes to determine the level of supply support provided for a particular weapons system. Table 2 describes the essentiality codes that the Military Departments submit to DLA. These definitions represent the codes upon submission to DLA, including any conversions accomplished and any criteria applied during conversion.

Table 2: Item Essentiality Codes Submitted to DLA

	Army	Navy AIR	Navy SEA	Air Force	Marine Corps
Engineering code assigned at part application level with no consideration for other supply-significant data.				X	
Engineering code assigned at part application level combined with essentiality codes at the system or end item level.			X		X
Engineering code assigned at part application level with consideration of maintenance level.	X				
Either: (1) engineering code assigned at part application level with maintenance considerations; or (2) code produced without considering assigned engineering code and based on specific supply management data.		X			

The part code indicates the degree of essentiality of an individual item (piece part) while the system code identifies the relationship of the part and the criticality of the system. Table 2 shows the disparity in item essentiality codes (1, 3, 5, 6, and 7) submitted to DLA.

The DLA materiel managers could not ensure that inventory levels targeted the appropriate mix of items, due to the incompatible essentiality codes transferred by the Military Departments. Table 3 shows significant variances in the essentiality codes for 1.2 million items recorded in the Weapons Systems Support Program as of October 31, 1995, with only one weapons system application.

Table 3: Distribution of Codes for Weapons-Related Items (By Percentage)

	Item Essentiality Code					
Service	1	3	5	6	7	Blank
Army	24	57	1		18	
Navy AIR	9	73	7		11	
Navy SEA	32	51	1		15	1
Air Force	45	27			28	
Marine Corps	46	52	1			1

Table 3 demonstrates the effect of inconsistent, subjective criteria. For example, only 9 percent of Naval aviation items were given the highest essentiality code (Code 1) while 45 percent of Air Force items were given that same code. Conversely, 73 percent of Naval aviation items were coded as nonessential (Code 3) while only 27 percent of Air Force items were given that same code.

Relative Essentiality of Similar Items. Using different criteria and definitions for assigning and reviewing essentiality codes resulted in widely variant patterns of essentiality for similar parts. For example, we compared frequency distributions of essentiality codes for similar parts and similar systems recorded in the Weapons Systems Support Program as of October 31, 1995. Table 4 shows wide variations in essentiality codes assigned to aircraft items in Federal supply groups 15 (Aircraft and Airframe Structural Components), 16 (Aircraft Components and Accessories), and 17 (Aircraft Launching, Landing, and Ground

Support Equipment). Imposing some standard criteria to be followed by all Military Departments should "even out" relative essentiality of secondary items.

Table 4: Distribution of Codes in Selected Aircraft-Related Federal Supply Groups (By Percentage)

	Item Essentiality Code				
Service	1	3	5	6	7
Army	43	24	1	1	31
Navy	11	81	7		1
Air Force	73	12			15

The variations in relative essentiality codes for similar parts in Table 4 indicate that essentiality codes are not an effective control mechanism to ensure equal support for similar systems. For example, 81 percent of Naval aviation parts in these three Federal supply groups are coded non-essential (Code 3) while only 12 percent of Air Force parts are coded non-essential.

In addition to reviewing the relative essentiality achieved by each Service's assignment procedures, we compared coding for similar weapons systems used by more than one Service. From the Weapons Systems Support Program as of October 31, 1995, we compared the essentiality codes assigned by the Army and Marine Corps for the High Mobility Multi-Wheeled Vehicle. The Army coded 173 of the vehicle's items, or 3.1 percent, as the highest essentiality code (Code 1), while the Marine Corps coded 869 of the vehicle's items, or 16.8 percent, with the same code.

Use of Codes. Procedures for using assigned essentiality codes were not consistent or effective. Specifically, on decisions related to materiel management, the use of the essentiality codes varied among the DoD Components.

Communication: Military Departments communicated essentiality codes to DLA but did not transfer essentiality information among themselves on multi-Service-used items.

Non-demand-supported stockage: Procedures for determining Numeric Stockage Objective quantities at DLA focused more on demand than on essentiality codes, while the Military Departments used essentiality coding and other supply management data.

Readiness-Based Spares: Essentiality codes were used as a screening factor for identifying candidates for readiness-based spares computations. However, within the models, degrees of essentiality were not always considered in computing allowance quantities.

Resource Allocation: Spare resourcing models generally used essentiality information as one variable affecting initial provisioning decisions. However, the models were often more sensitive to other factors (such as demand) than to essentiality code, or all essentiality codes were set to the same level prior to computations.

Weapons System Availability: Systems for relating the range and depth of stock to weapons system readiness via essentiality codes were not developed for all of DoD. The Materiel Management Standard System, if developed, would contain provisions for measuring this relationship.

In the DoD Components' supply management systems, uses of essentiality codes ranged from limited use to being used as an important factor in supply management decisions at the wholesale and retail levels. Table 5 displays the uses for essentiality codes in Components' current materiel management systems:

Table 5: Uses for Item Essentiality Codes

Use	Army	Navy AIR	Navy SEA	Air Force	Marine Corps	DLA
Allowance Lists	X		X		X	
Buy Priorities	X					
DLA WSSP *	X	X	X	X	X	
Initial Spares	X	X	X	X	X	X
Repair Decisions				X		
Replenishment Qty.	X					X
Retention Levels	X					X
Safety Levels	X			X		X
War Reserves	X			X	X	

* WSSP: Weapons Systems Support Program

The Military Departments interpret the intent of DoD 4140.1-R differently based on the varying uses and the basis for the codes actually used. In the absence of a standard materiel management system, they use essentiality codes in varying degrees in their supply management systems. However, the codes they use are not the "engineering codes" (1, 3, 5, 6, and 7) assigned during initial provisioning. Rather, the Military Departments convert essentiality codes using different criteria (see Appendix E for conversion criteria) and consider other supply management data to make stockage decisions. The codes transmitted to DLA were either products of the internal conversion process or the original assigned engineering codes.

In addition to the Military Departments using the essentiality codes, DLA uses the essentiality codes registered in its Weapons Systems Support Program to make stockage decisions. DLA stockage policies provide for enhanced supply support for items coded 1, 5, or 6 during initial provisioning and enhanced support for items coded 1, 5, 6, and 7 during replenishment. Along with the essentiality code, the Military Departments assign a weapons systems group code (letters A to C) that rank systems criticality. DLA combines the weapons systems group code and the essentiality code and assigns an alpha weapons systems indicator code. The assigned weapons systems indicator code determines the level of intensified management to be applied by DLA managers.

On November 24, 1995, DLA issued a new stockage policy for weapons systems items in response to Inspector General, DoD Report No. 95-027, "Defense Logistics Agency's Weapons Systems Support Program," November 9, 1994 (see Appendix B). However, DLA centers did not compute consistent supply support for weapons system items. Each of the three Defense Supply Centers used a different matrix to compute the percentage of supply support. Defense Supply Center, Columbus considers annual demand, backorders, and not-mission-capable supply requisitions in their supply support decisions for weapons systems items. Defense Industrial Supply Center and Defense Supply Center, Richmond convert the weapons systems indicator code, along with requisition frequency and annual demand, into supply management category codes to determine the percentage of supply support. This percentage is used to adjust the quarterly forecasted demand when computing procurement quantities. However, there were inconsistencies.

- The Defense Industrial Supply Center's matrix allows 80 percent of the quarterly forecast as the level of support for an item coded with a critical weapons systems indicator code, while the Defense Supply Center, Richmond's matrix allows 100 percent of the quarterly forecast to be used for an item coded with the same weapons systems indicator code.

- The Defense Supply Center, Richmond did not distinguish between essentiality codes that were more critical than others. An item assigned the most critical code that had the same requisition frequency and demand as an item coded least critical would receive the same level of supply support. For example, an item with a weapons systems indicator code of most critical and a item with a weapons systems indicator code of least critical each having a demand frequency of 100 or more would both receive the same level of support.

DoD policy relies on essentiality coding to ensure maximum weapons system readiness at least cost. For essentiality codes to be an effective control, DoD Components should use consistent procedures for applying consistent essentiality codes to materiel management decisions.

Review of Codes. Procedures for review of essentiality codes were not effective. DoD policy requires the Military Departments to periodically review the assignment of essentiality codes to ensure that they reflect the current status of the items. However, reviews were not conducted to ensure that essentiality codes assigned were current, and essentiality codes assigned were not always accurate. When an item's status changes, the managing activity should be notified timely.

We judgmentally selected a sample of 758 items that were recorded either in the Military Departments' weapons systems application files or in DLA's Weapons Systems Support Program. We asked responsible equipment specialists or engineering personnel within each Military Department to review the accuracy of the assigned essentiality codes. Their review showed that essentiality codes were not accurate for 246 of the 758 items. Essentiality codes were overstated for 82 item applications, understated for 72 item applications, and the item was no longer used on the applicable weapons systems for 92 items. Appendix F shows the accuracy of items reviewed by weapons system.

Technical personnel determined that essentiality codes for 141 of the 154 items were either overstated or understated for the applicable weapons systems. For the remaining 13 items, 10 were incorrect because a conversion criterion was not updated and 3 had been reclassified due to a maintenance policy change.

In response to Inspector General, DoD Report No. 95-027, the Military Departments stated that reconciliations would be performed annually between their weapons systems applications files and DLA's Weapons Systems Support Program data base. While the number of essential items for the most critical weapons systems recorded in the Weapons Systems Support Program grew by 24 percent between December 1993 and April 1996, the Military Departments had made minimal progress validating the accuracy of essentiality codes and reconciling weapons systems files with DLA, particularly the Army and the Air Force. Appendix G shows the status of the Military Departments' reconciliation efforts.

Communication of Codes. Procedures for communicating essentiality codes were not effective. DoD 4140.1-R requires using DoD Components to provide application data to DoD integrated managers. Although Military Departments use the codes to transfer essentiality data to DLA, they did not transfer essentiality code information among themselves. In addition, controls were not adequate to ensure that essentiality codes were submitted timely to DLA. Data were not available to quantify how many essentiality codes were untimely. However, there were other indicators. Foremost were the tens of thousands of discrepancies between the files reconciled, the 92 sample items no longer used on the weapons systems, and the elapsed time between reconciliations. For example, for Navy (Air) items, there was no automated update except the every-other-year reconciliation by weapons system.

To register or update an item in DLA's Weapons Systems Support Program, the Military Departments process an automated transaction (WS1), and if a transaction does not process, a reject transaction (WS3) is generated and forwarded to the originator. The rejected transaction contains a reason code describing why the

transaction did not process. Five of the seven inventory control points visited did not research and resubmit the rejected transactions. Rejected transactions can occur daily, and available data are not cumulative. However, the outcome of the reconciliations performed indicated a high reject rate. For example, DLA rejected 55,032 of the 153,479 transactions the Marine Corps submitted after its January 1996 reconciliation. Although the Marine Corps was working these rejects, this large error rate, coupled with the lack of research and resubmission of rejected transactions by the Army and Air Force inventory control points visited, indicates materiality.

Level of Support

From a DoD perspective, the incompatibility of essentiality codes among the Military Departments makes resource allocation and intensity of management based on these codes ineffective. The materiel managers' use of incompatible codes to make stockage decisions and inventory purchases may not yield the appropriate mix of items that ensure weapons systems' readiness and efficient use of defense resources. The wide variation in essentiality codes for similar parts means that weapons systems of equal importance to the defense mission may not receive equal supply support.

Conclusion

Essentiality coding of secondary items provides a needed means of communicating the relative military worth of support items. If applied consistently, essentiality codes would provide a control mechanism to ensure that DoD Components were achieving optimum weapons system support at the least cost. Criteria for assigning essentiality codes was inconsistent among the Military Departments and, therefore, yielded codes with inconsistent definitions and different ranges of essentiality. Systems for assigning codes should ensure appropriate relative essentiality among support items.

Using a standard criteria matrix to assign essentiality codes would ensure a "common denominator" among codes assigned by different Departments. Also, standard criteria for item essentiality would form the needed basis for a reliable essentiality coding structure of item essentiality to assembly/component essentiality and to weapons system/end item essentiality. By imposing factors other than engineering analysis on essentiality code decisions, resulting codes would be more useful for supply management decisions. Therefore, in addition to standardizing the criteria for assigning codes, DoD Components should consistently use essentiality coding for supply management decisions, and establish controls to ensure weapons systems readiness objectives can be achieved.

Recommendations for Corrective Action

A. We recommend that the Deputy Under Secretary of Defense (Logistics):

1. Develop standard criteria for use by the Military Departments to assign and review essentiality codes. At a minimum the criteria should include:

   Maintenance level: Items used only during depot maintenance should be coded less essential than items that can be replaced at the organizational level.

   Maintenance replacement factor (likelihood of failure): Items not expected to fail should not be given essentiality codes for supply management purposes.

   Concurrent replacement: Concurrent replacement items should be given the same essentiality codes as their next higher assembly.

   Redundancy: Assignment of essentiality codes at the part or system level should include an analysis of redundancy to identify cases where essentiality could be reduced because other systems or parts perform the same function.

   Common hardware: Common hardware items should be considered non-essential unless special justifications exist for coding such items essential.

   Default codes: All items should be considered non-essential until a code has been assigned incorporating all the factors in the standard criteria.

2. Clarify the objective(s) of essentiality coding and specify how DoD Components should use essentiality codes in materiel management decisions and supply management systems.

3. Revise DoD 4140.1-R to require DoD Components to establish procedures and controls to ensure:

   a. Review and validation of assigned essentiality codes when an assignment criterion changes.

b. Timely submission of transactions to the activity managing the item that establishes the essentiality code for items or updates the codes previously provided, such as removing obsolete items or weapons systems, or updating due to assignment criterion changes.

c. Transactions that are rejected by the managing activity are researched, corrected, and resubmitted on a timely basis.

d. Performance of annual reconciliations between Military Departments' weapons systems applications files and the DLA Weapons Systems Support Program data base.

4. Direct the Military Departments to establish procedures to communicate essentiality codes to all DoD Integrated Managers.

B. We recommend that the Director, Defense Logistics Agency develop a consistent policy for supply support of Weapons Systems Support Program items. At a minimum, the policy should provide that the level of support be prioritized by the various weapons systems indicator codes assigned by Defense Logistics Agency to weapons system items.

Management Comments

Deputy Under Secretary of Defense (Logistics) Comments. The Deputy Under Secretary generally concurred with the recommendations and is establishing a DoD Working Group, which will use the recommendations as a baseline to develop standard criteria and policy changes. The estimated completion date is July 1997.

Director, Defense Logistics Agency Comments. The Director concurred with the recommendation and stated that standardization proposals under development in the inventory investment strategy would satisfy the recommendation. Implementation will be phased to prevent a large wave of new procurements. Initial implementation was expected by January 31, 1997.

Part II - Additional Information

Appendix A. Audit Process

Scope and Methodology

We reviewed DoD and Military Departments' policies and procedures for assigning and updating essentiality codes for weapons system items (both reparable and consumable). Also, we tested Military Departments' compliance with DoD policy and DLA regulations pertaining to the Weapons Systems Support Program.

To determine accuracy of essentiality codes, we visited inventory control points and engineering activities having responsibility for assigning and updating codes on 10 weapons systems. We interviewed engineers or equipment specialists to obtain justification for essentiality codes assigned to a judgmental sample of 758 items from a universe of 167,508 items, as of the second quarter of FY 1996 (684 unique items used on the 10 weapons systems). We compared criteria used by engineers or equipment specialists for assigning essentiality codes to individual items. For items used by more than one Service or items managed by other than the using Service, we compared essentiality codes from applications files to the codes communicated among Components. Details are in Appendix D.

We evaluated policies and procedures for using essentiality codes in DoD Components' current materiel management systems. We evaluated the uses of essentiality codes in DoD's Components' wholesale and retail requirements processes by reviewing system documentation, running simulations, and holding discussions with materiel management personnel.

A new Materiel Management Standard System had been proposed but was not ready for use or installed at using activities at the time of our audit. System developers planned to accommodate existing essentiality coding structures from all DoD Components. However, because of a subsequent decision to not deploy a standard system, DoD Components had the option to accept, reject, and customize applications that may be deployed. Therefore, we did not evaluate any proposed uses of essentiality codes in the proposed applications.

This economy and efficiency audit was conducted from September 1995 through October 1996. The audit was conducted in accordance with auditing standards issued by the Comptroller General of the United States and, accordingly, included such tests of internal controls as were considered necessary.

Organizations and Individuals Visited and Contacted

Contacts During the Audit. We visited or contacted individuals and organizations within the DoD. Further details are available on request.

Management Control Program

DoD Directive 5010.38, "Internal Management Control Program," April 14, 1987,* requires DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of Review of Management Controls. The audit evaluated the adequacy of procedures used by the Military Departments to ensure weapons system items were assigned the correct essentiality code. We also evaluated the implementation of the Weapons Systems Support Program by the Military Departments and DLA. Specifically, we evaluated the controls used by the Military Departments to ensure that periodic reviews of weapons system essentiality codes were performed; the accuracy and timeliness of updating the Weapons Systems Support Program data base to ensure that the data base reflected the current status of the Military Departments' weapons systems applications files; and the compatibility of codes among DoD Components.

Adequacy of Management Controls. The audit identified material internal control weaknesses as defined by DoD Directive 5010.38. Internal controls were not adequate to ensure that essentiality codes were valid and that the DLA Weapons Systems Support Program reflected the current status of Military Departments' weapons systems applications files. Additionally, controls were not sufficient to ensure essentiality codes were compatible among DoD Components. All recommendations, if implemented, should correct the identified weaknesses. A copy of this report will be provided to the senior officials in charge of management controls in the Office of the Secretary of Defense, Military Departments, and the DLA.

Adequacy of Management's Self-Evaluation. Management at the Military Departments' inventory control points did not identify the accuracy of essentiality codes or the timeliness of updating the Weapons Systems Support Program data base as assessable units under the program, and, therefore, did not identify or report the material management control weaknesses identified by the audit.

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* DoD Directive 5010.38 has been revised as "Management Control Program," August 26, 1996. The audit was performed under the April 1987 version of the directive.

Appendix B. Summary of Prior Audits

The Inspector General, DoD, issued Report No. 96-022, "Requirements for Current Inventory Purchases of Consumable Items," on November 9, 1995. The report stated that the Military Departments and DLA were prematurely and unnecessarily purchasing consumable items. The report recommended that the Director, DLA, issue guidance for inventory managers to verify that weapons system information is accurate, as part of the process of verifying procurement requirements. DLA nonconcurred with the recommendation and stated the appropriate recommendation would be to require that the Military Departments provide accurate and up-to-date weapons system application and essentiality data to DLA.

The Inspector General, DoD, issued Report No. 95-027, "Defense Logistics Agency's Weapons Systems Support Program," on November 9, 1994. The report stated that the purpose of the Weapons Systems Support Program was not being fully achieved. Specifically, about 60 percent of the items managed under the program received no additional support and, therefore, there was no assurance that the program adequately supported the Military Departments' weapons systems readiness objectives. The report recommended that DLA and the Military Departments establish formal arrangements for periodic validation and reconciliation of weapons systems applications files. The report also recommended that DLA and the Military Departments conduct a joint study to reduce the number of items included in the Weapons Systems Support Program and determine which were to be intensively managed. The report further recommended that Military Departments establish controls to ensure that periodic reviews of weapons systems essentiality codes were performed, and that DLA develop a consistent supply support policy for the DLA supply centers. The Military Departments generally concurred with the recommendations and stated that periodic reconciliations and validations of weapons systems application files would be performed. The DLA concurred with the recommendations and stated procedures have been established to perform annual reconciliations of weapons system national stock numbers and essentiality codes, and that new stockage policy was signed on November 24, 1995.

The Inspector General, DoD, issued Report No. 94-071, "The Transfer of the Management of Consumable Items to the Defense Logistics Agency," on March 31, 1994. The report showed that items involved in the transfer from the Military Departments to DLA had not been appropriately coded with weapons systems management codes, and that other items had been assigned incorrect weapons system management codes. The report recommended that DLA establish a tracking system for items identified by the Military Departments as weapons

systems essential, that logistics data be recorded on supply records, and that followup action be taken when weapons systems essentiality data were not submitted. DLA concurred with the recommendation and stated that the Services do not provide sufficient information to establish a tracking system. However, DLA will encourage the Services to identify weapons systems to DLA as soon as possible so that optimum support can be provided and to periodically review the weapons systems which make up the DLA Weapons Systems Support Program to ensure that the national stock numbers in the DLA system are accurate, updated, and complete with the appropriate essentiality codes.

The General Accounting Office issued Report No. NSIAD-95-1 (OSD Case No. 9793), "Inventories Contain Nonessential and Excessive Insurance Stocks," on January 20, 1995. This report stated that significant numbers of nonessential parts and supplies continue to be stocked as insurance items because the Naval Aviation Supply Office (now the Naval Inventory Control Point, Philadelphia) and the Defense Industrial Supply Center do not have the internal controls to periodically review insurance items to identify those that are unneeded because they do not meet essentiality criteria. The report recommended that the Secretary of Defense direct the Navy and DLA to periodically review insurance items to ensure that they are mission essential and stocked in allowable quantities, and to dispose of existing nonessential insurance stocks. The Deputy Under Secretary of Defense for Logistics did not agree with most of the report's findings but generally agreed with the recommendation. The Deputy Under Secretary stated that a memorandum was issued on February 10, 1995, to reemphasize DoD policy for buying and retaining insurance items.

Appendix C. Military Mission Essentiality Code Matrix

DoD 4140.1-R specifies a multi-indenture system of assigning essentiality codes. The specified hierarchy identifies the relationship of individual items (piece parts), assemblies or components (subsystems), and the weapons system or end item, and indicates an overall military mission essentiality. The following table details the DoD 4140.1-R system for assigning codes. Definitions for each code are on the following page.

Weapon System or End Item Essentiality Code[1]		Assembly or Component Essentiality Code[2]		Item Essentiality Code[3]		Military Mission Essentiality Code[4]
A	+	D	+	1, 5	=	I
A	+	D	+	6, 7	=	II
A	+	D	+	3	=	IV
A	+	E	+	1, 5	=	I
A	+	E	+	6, 7	=	III
A	+	E	+	3	=	IV
A	+	F	+	1, 5	=	II
A	+	F	+	6, 7	=	III
A	+	F	+	3	=	IV
A	+	G	+	1, 3, 5, 6, 7	=	IV
B	+	D	+	1, 5	=	II
B	+	D	+	6, 7	=	III
B	+	D	+	3	=	IV
B	+	E	+	1, 5	=	II
B	+	E	+	6, 7	=	III
B	+	E	+	3	=	IV
B	+	F	+	1, 5	=	II
B	+	F	+	6, 7	=	III
B	+	F	+	3	=	IV
B	+	G	+	1, 3, 5, 6, 7	=	IV
C	+	D, E, F, G	+	1, 3, 5, 6, 7	=	IV

[1]**Weapon System or End Item Mission Essentiality Code.** This code indicates whether the weapon system or end item is essential to the military mission of the Service:

Code A - Highest Priority Mission-Essential. Mission-essential materiel required to accomplish military mission of activities assigned Force Activity Designators I or II.
Code B - Lower Priority Mission-Essential. Mission-essential materiel required to accomplish military mission of activities assigned Force Activity Designator III, IV, or V.
Code C - Not Mission-Essential. Materiel that does not qualify as mission-essential.

[2]**Assembly or Component Essentiality Code.** A code that indicates the extent the assembly or component is essential to the performance of the primary and/or secondary missions of the weapons system and/or end item. The degree of essentiality depends on the effect the item failure would have on weapons system and/or end item readiness.

Code D - Not Mission Capable. Materiel whose failure will prevent performance of any wartime and/or peacetime missions (such as total loss of mobility or propulsion).
Code E - Severe Degradation of Primary Mission. Materiel whose failure will severely limit intended or designed primary mission of function.
Code F - Not Fully Mission Capable. Materiel whose failure will render the weapons system or end item incapable of fully performing all missions, although some missions might continue to be performed. This includes total loss or severe degradation of secondary mission.
Code G - Fully Mission Capable. Materiel whose failure will have no mission impact.

[3]**Item Essentiality Code.** This code indicates the degree to which the failure of the part affects the ability of the end item to perform its intended operation.

Code 1. Failure of this part will render the end item inoperable.
Code 3. Failure of this part will not render the end item inoperable.
Code 5. Item does not qualify for Code 1, but is needed for personal safety.
Code 6. Item does not qualify for Code 1, but is needed for legal, climatic, or other requirements peculiar to the planned operational environment of the end item.
Code 7. Item does not qualify for Code 1, but is needed to prevent the impairment of, or the temporary reduction of, operational effectiveness of the end item.

[4]**Military Mission Essentiality Code.** This indicates the composite effect of an item on the overall military mission based on the most critical significant application of the item:

Code I. Most essential to military mission.
Code II. Highly essential to military mission.
Code III. Less essential to military mission.
Code IV. Not essential to military mission.

Appendix D. Sample Selection

For purposes of testing controls and verifying the accuracy of individual items, we judgmentally selected 10 weapons systems for review. We selected at least two systems for each Service. We included systems that were used by more than one Service and systems used by only one Service. For each weapons system, we extracted all items registered in DLA's Weapons Systems Support Program data base as of October 31, 1995, and all items from the Services' applications files as of the second quarter of FY 1996. We then selected a judgmental sample of individual items based on priority (order for selection), essentiality code, supply status code, standard price, backorders, war reserve quantities, and annual demands greater than stock on hand. We selected individual items such that the resulting sample represented the significant characteristics of the items making up each weapon system. We also attempted to include at least 20 Service-managed consumable items, at least 20 Service-managed reparable items, and at least 20 DLA-managed consumable items in each sample. For systems used by more than one Service, samples included items used by more than one Service (see "No. of Common Items" column in table below). The following table shows the weapons systems included in the sample and their respective sample sizes:

System	Service	No. of Sample Items	No. of Common Items
SINCGARS (Single Channel Ground and Air Radio System)*	Army	64	9 (Army)
	Marine Corps	25	
HMMWV (High Mobility Multi-Wheeled Vehicle)	Army	62	30 (Marine Corps)
	Marine Corps	46	
LAV-25 (Light Armored Vehicle)	Marine Corps	60	
UH-60A (Black Hawk Helicopter)	Army	72	35 (Navy)
SH-60B (Sea Hawk Helicopter)	Navy	64	
T-58 (Aircraft Engine)	Navy	61	
	Air Force	48	
SLQ-32 (Radar)	Navy	74	
AIM-7 (Sparrow Missile)	Navy	71	
A-10 (Aircraft)	Air Force	46	
F101-GE-102 (Aircraft Engine)	Air Force	65	
	Total	**758**	**74**

By taking the total sample size and deducting 74 common items, we determined there were 684 unique items in our sample.

Appendix E. Military Departments' Essentiality Code Conversion Criteria

An "X" indicates that a particular criterion was being used by that Military Department in a decision to convert or modify item essentiality codes for internal purposes for transfer to DLA.

Criteria	Army	Navy AIR	Navy SEA	Air Force	Marine Corps
Conversion to alpha format	X				
Conversions based on system or end item essentiality and part essentiality			X		X
Demand history		X			
Design is unstable		X			
End item essentiality assessment	X			X	X
Engineering source approval required		X			
Federal supply class definition		X			
Initial engineering based codes	X	X	X	X	
Rotable pool items awaiting parts		X			
End items not mission capable due to lack of part		X			
Special test facilities required		X			
System level essentiality assessment			X	X	

Appendix F. Accuracy of Essentiality Codes

Weapons System	Total Items Reviewed by Manager			Total Overstatements and Understatements (by Manager)						Items No Longer Used			Total Number of Items Erroneously Coded
				Service Managed		DLA Managed		Total Items					
	Service	DLA	Total	Under Stated	Over Stated	Under Stated	Over Stated	Under Stated	Over Stated	Service	DLA	Total	
SINCGARS (Army)[1/]	39	25	64	1	0	2	4	3	4	0	0	0	7
SINCGARS (Marines)	10	15	25	0	0	1	3	1	3	0	1	1	5
HMMWV (Army)[2/]	40	22	62	5	0	7	0	12	0	0	1	1	13
HMMWV (Marines)	26	20	46	4	3	2	1	6	4	3	0	3	13
LAV-25[3/]	40	20	60	3	5	1	0	4	5	0	6	6	15
UH-60A[4/]	45	27	72	7	1	3	1	10	2	5	7	12	24
SH-60B[5/]	44	20	64	3	2	0	0	3	2	1	1	2	7
T-58 (Navy)[6/]	41	20	61	11	0	0	0	11	0	1	2	3	14
T-58 (Air Force)	24	24	48	0	0	0	0	0	0	24	24	48	48
SLQ-32[7/]	50	24	74	12	15	4	12	16	27	1	0	1	44
AIM-7[8/]	49	22	71	0	5	0	9	0	14	2	6	8	22
A-10[9/]	40	6	46	4	8	1	3	5	11	0	0	0	16
F101-GE-102[10/]	40	25	65	0	5	1	5	1	10	0	7	7	18
Totals:	**488**	**270**	**758**	**50**	**44**	**22**	**38**	**72**	**82**	**37**	**55**	**92**	**246**

1/ Single Channel Ground and Air Radio System
2/ High Mobility Multi-Wheeled Vehicle
3/ Light Armored Vehicle
4/ Black Hawk Helicopter
5/ Sea Hawk Helicopter
6/ Aircraft Engine
7/ Radar
8/ Sparrow Missile
9/ Aircraft
10/ Aircraft Engine

Appendix G. Periodic Validation of Essentiality Codes

The method used to reconcile the files is determined by the Military Departments, and they are responsible for submitting transactions to update the Weapons Systems Support Program when differences are identified. We determined that the Military Departments either did not perform annual reconciliations of weapons systems applications files for DLA-managed items to the DLA Weapons Systems Support Program data base, or, if performed, the results showed that there were significant differences between the files.

Army

On December 16, 1994, the Army Materiel Command tasked its major subordinate commands to perform a complete validation and reconciliation of all weapons systems applications pertaining to the DLA Weapons Systems Support Program. Only one of the three Army inventory control points visited had performed a reconciliation, and it was limited to only one weapons system. The results of the reconciliation showed that there were significant differences between the weapons system application file and the DLA Weapons Systems Support Program. There were about 9,000 records on the application file and only 8,284 items on the DLA Weapons Systems Support Program file. Additionally, for the items that were on both files, essentiality data did not agree for 1,066 items. Personnel at the other two inventory control points informed us that at one activity they were not aware of the requirement to perform an annual reconciliation, and at the other a reconciliation had not been performed since 1992.

Navy

On August 30, 1994, the Naval Supply Systems Command issued instructions for Navy inventory control points to annually reconcile weapons system applications pertaining to the DLA Weapons Systems Support Program.

Between July 1995 and July 1996, the Naval Inventory Control Point, Philadelphia, which is responsible for aircraft parts, reconciled 58 of 75 weapons systems with the DLA. As a result of the reconciliations, approximately 196,000 items were added to the DLA Weapons Systems Support Program file. The other 17 weapons systems had not been reconciled since at least 1990.

During the period April 1995 through March 1996, the Naval Inventory Control Point, Mechanicsburg, which is responsible for ships parts, completed 160 of 313 reconciliations that were scheduled. As a result of the reconciliations,

153,168 items were added to the Weapons Systems Support Program file and 61,368 items were deleted. The inventory control point's procedures provide that each year weapons system program managers are given the option of requesting that a reconciliation be done. If a program manager requests a reconciliation, a match is made between the inventory control point's weapons system application files and DLA's Weapons Systems Support Program data base. If there is a mismatch between the files, a transaction is sent to DLA to update the DLA Weapons Systems Support Program file.

Air Force

On December 14, 1994, the Air Force, in response to a followup inquiry by the Inspector General, DoD, stated that the Air Force and DLA had developed a schedule for the reconciliation of weapons systems applications files. As of June 1996, the Air Force was in the process of doing a complete reconciliation for only six weapons systems. Air Force personnel said that a complete reconciliation for all systems was on hold until problems between Air Force and DLA systems were resolved. One of the problems noted was that the DLA Weapons Systems Support Program file contained over 200,000 records where a national stock number was registered more than once for the same weapons system. This occurred primarily because different Air Force inventory control points registered the same national stock number against the same weapons system. For some national stock numbers the essentiality code was the same and in other cases the code was different. Air Force and DLA are currently taking actions to resolve this problem.

Marine Corps

On October 3, 1994, the Marine Corps issued instructions for the periodic reconciliation of weapons systems applications files for DLA-managed items. The instruction was updated on January 19, 1996 to specify that the reconciliation would be done annually. In January 1996, the Marine Corps reconciled the entire DLA weapons systems data base of 208,640 records against the Marine Corps weapons systems applications files. There were 153,479 discrepancies between the files. Specifically, 28,201 records had to be deleted from the Weapons Systems Support Program files; 88,833 records had to be added to the file; and 36,445 records had data (essentiality code, source of supply, etc.) requiring revision.

The Marine Corps processed transactions to DLA to update the DLA Weapons Systems Support Program files for the discrepancies noted in the reconciliation. DLA rejected 55,032 of the 153,479 transactions. Approximately 25,000 of the rejects occurred because of a discrepancy in the weapons systems designator code

and about 24,000 were rejected because of a discrepancy in the national stock number. DLA and Marine Corps are in the process of determining why the discrepancies between the files existed.

Appendix H. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
- Deputy Under Secretary of Defense (Logistics)
  - Assistant Deputy Under Secretary of Defense (Materiel and Distribution Management)
- Director, Defense Logistics Studies Information Exchange

Under Secretary of Defense (Comptroller)
- Deputy Chief Financial Officer, Accounting Policy Directorate
- Deputy Comptroller (Program/Budget)

Assistant to the Secretary of Defense (Public Affairs)

Department of the Army

Assistant Secretary of the Army (Financial Management and Comptroller)
Deputy Chief of Staff (Logistics), Supply and Maintenance Policy
Commander, Army Materiel Command
Commander, U.S. Army Aviation and Troop Command
Commander, U.S. Army Communications and Electronics Command
Commander, U.S. Army Tank-Automotive Command
Auditor General, Department of the Army

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)
Commander, Naval Supply Systems Command
Deputy Chief of Staff for Installations and Logistics, Marine Corps
Commander, Naval Inventory Control Point
Commanding General, Marine Corps Logistics Bases
Director, Dudley Knox Library, Naval Post Graduate School
Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Deputy Chief of Staff (Logistics), Directorate of Supply
Commander, Air Force Materiel Command
Commander, Oklahoma City Air Logistics Center
Commander, Sacramento Air Logistics Center
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
    Defense Industrial Supply Center
    Defense Supply Center, Columbus
    Defense Supply Center, Richmond
Director, National Security Agency
    Inspector General, National Security Agency
Inspector General, Defense Intelligence Agency

Non-Defense Federal Organizations and Individuals

Office of Management and Budget
General Accounting Office
    National Security and International Affairs Division
        Technical Information Center

Chairman and ranking minority member of each of the following congressional committees and subcommittees:

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on National Security, Committee on Appropriations
House Committee on Government Reform and Oversight
House Subcommittee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight
House Committee on National Security

Part III - Management Comments

Deputy Under Secretary of Defense (Logistics) Comments

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000

ACQUISITION AND TECHNOLOGY

14 JAN 1997

(L/MDM)

MEMORANDUM FOR DOD INSPECTOR GENERAL
THROUGH: CHIEF, CAIR

SUBJECT: Draft Audit Report on Mission Essentiality Coding (Project 5LD-9016)

This responds to your memorandum of November 8, 1996, on the subject draft audit report. Recommendation A is directed to this office, and is addressed in the attachment. This office appreciates the work of the auditors in performing this review. We welcome the continued assistance of your office in our effort to accomplish these improvements.

John Phillips

John F. Phillips
Deputy Under Secretary
of Defense (Logistics)

Attachment

A. "We recommend that the Deputy Under Secretary of Defense (Logistics):

1. Develop standard criteria for use by the Military Departments to assign and review essentiality codes. At a minimum the criteria should include:

   Maintenance level: Items used only during depot maintenance should be coded less essential than items that can be replaced at the organizational level.

   Maintenance replacement factor (likelihood of failure): Items not expected to fail should not be given essentiality codes for supply management purposes.

   Concurrent replacement: Concurrent replacement items should be given the same essentiality codes as their next higher assembly.

   Redundancy: Assignment of essentiality codes at the part of system level should include an analysis of redundancy to identify cases where essentiality could be reduced because other systems or parts perform the same function.

   Common hardware: Common hardware items should be considered non-essential unless special justifications exist for coding such items essential.

   Default codes: All items should be considered non-essential until a code has been assigned incorporating all the factors in the standard criteria.

2. Clarify the objective(s) of essentiality coding and specify how DoD Components should use essentiality codes in materiel management decisions and supply management systems.

3. Revise DoD 4140.1-R to require DoD Components to establish procedures and controls to ensure:

   A. Review and validation of assigned essentiality codes when assignment criteria an changes.

   B. Timely submission of transactions to the activity managing the item that establishes the essentiality code for items or updates the codes previously provided, such

ATTACHMENT

as removing obsolete items or weapons systems, or updating due to assignment criterion changes.

C. Transactions that are rejected by the managing activity are researched, corrected, and resubmitted on a timely basis.

D. Performance of annual reconciliations between Military Departments' weapons systems applications files and the DLA Weapons Systems Support Program data base.

4. Direct the Military Departments to establish procedures to communicate essentially codes to all DoD Integrated Managers."

This office generally concurs with the recommendation. A DoD Working Group is being established to develop standard criteria and recommend policy changes, using the IG recommendation as a baseline. The first meeting of the Working Group will be in February 1997. The anticipated date of completion is July 1997. The status of actions will be provided to your office on a regular basis.

2

Director, Defense Logistics Agency Comments

DEFENSE LOGISTICS AGENCY
HEADQUARTERS
8725 JOHN J. KINGMAN ROAD, SUITE 2533
FT. BELVOIR, VIRGINIA 22060-6221

IN REPLY REFER TO DDAI

30 DEC 1996

MEMORANDUM FOR THE ASSISTANT INSPECTOR GENERAL FOR AUDITING, DEPARTMENT OF DEFENSE

SUBJECT: Draft Report on Mission Essentiality Coding (Project No. 5LD-9016)

This is in response to subject draft report dated November 8, 1996. If you have any questions, please contact Dave Stumpf at (703)767-6266.

OLIVER E. COLEMAN
Chief, Internal Review Office

Encl

Federal Recycling Program Printed on Recycled Paper

Subject: Draft Report on Mission Essentiality Coding (Project No. 5LD-9016)

Finding: Policies and procedures for assigning, using, reviewing, and communicating essentiality codes were not effective. This occurred because:

- Military Departments did not comply with the standardized essentiality coding structure when assigning codes.

- DoD policy for assigning essentiality codes was definitional in nature and did not offer specific criteria for assigning individual codes.

- Essentiality codes were not consistently used by the various DoD Components for materiel management decisions.

- Controls were not adequate to ensure that essentiality codes were current and that using activities communicated essentiality codes to activities managing the items.

As a result, materiel managers could not ensure that either stockage decisions or inventory purchases targeted the appropriate mix of items or that weapon systems of equal military significance received equal support. Thus, there was no assurance that weapons systems' readiness objectives could be achieved at the least cost and with optimal support.

DLA COMMENTS: Concur without comments.

Internal Management Control Weakness: Nonconcur.

Action Officer: Michael Pouy, MMLSR, (703)767-1616, December 2, 1996
Review/Approval: Randle D. Bales, Capt, SC, USN, MML, December 13, 1996
Coordination: Dave Stumpf, DDAI, 767-6266
Oliver E. Coleman, DDAI, 767-6464 Oliver Coleman 23 Dec. 96

DLA APPROVAL:

Subject: Draft Report on Mission Essentiality Coding (Project No. 5LD-9016)

Recommendation B: We recommend that the Director, Defense Logistics Agency develop a consistent policy for supply support of Weapons Systems Support Program items. At a minimum, the policy should provide that the level of support be prioritized by the various weapons systems indicator codes assigned by Defense Logistics Agency to weapons systems items.

DLA COMMENTS: CONCUR. DLA published a standard, essentiality-based stockage policy in November 1995, and has under development a proposal to standardize the use of weapon system essentiality coding in the inventory investment strategy. These changes were not developed in response to the audit, but they do satisfy the recommendation. Implementation will be phased to prevent a large initial wave of new procurements.

Disposition: Action is ongoing. Estimated Completion Date: Initial implementation 31 January 1997

Action Officer: Michael Pouy, MMLSR, (703)767-1616, December 2, 1996
Review/Approval: Randle D. Bales, Capt, SC, USN, MML, December 13, 1996
Coordination: Dave Stumpf, DDAI, 767-6266
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DLA APPROVAL:

Audit Team Members

The Naval Audit Service managed this joint audit and the following team members made significant contributions to this report.

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