Audit Report

OFFICE OF THE INSPECTOR GENERAL

DISPOSITION AND REUTILIZATION OF DIAGNOSTIC EQUIPMENT AT DOD AVIATION MAINTENANCE DEPOTS

Report No. 95-296

August 21, 1995

Department of Defense

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Acronyms

DMSS	Depot Maintenance Standard System
IMRL	Individual Material Readiness List
TMDE	Test, Measurement, and Diagnostic Equipment

INSPECTOR GENERAL
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August 21, 1995

MEMORANDUM FOR DEPUTY UNDER SECRETARY OF DEFENSE FOR LOGISTICS
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT)
ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL MANAGEMENT AND COMPTROLLER)
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Audit Report on Disposition and Reutilization of Diagnostic Equipment at DoD Aviation Maintenance Depots (Report No. 95-296)

We are providing this audit report for review and comment. We considered management comments on a draft of this report in preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. The Assistant Deputy Under Secretary of Defense (Logistics Business Systems and Technology Development) concurred that a standard asset utilization capability is warranted, but did not address the Depot Maintenance Standard System inter-Service and intra-Service capability to collect, evaluate, and disseminate utilization data. The Army concurred with all recommendations but its comments were not fully responsive. The Navy did not comment on a draft of this report. The Air Force concurred with all recommendations, but its comments on Recommendation 2. did not fully address the issues. We request that the Deputy Under Secretary of Defense for Logistics, the Army, the Navy, and the Air Force provide comments on the five unresolved recommendations by October 23, 1995. The unresolved recommendations and the specific requirements for comments are identified in the Management Comments Required table at the end of the finding.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. John A. Gannon, Audit Program Director, at (703) 604-9427 (DSN 664-9427) or Mr.Tilghman Schraden, Audit Project Manager, at (703) 604-9436 (DSN 664-9436). See Appendix G for the report distribution. The team members are listed on the inside back cover.

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Office of the Inspector General, DoD

Report No. 95-296 **August 21, 1995**
(Project No. 4LB-0059)

Disposition and Reutilization of Diagnostic Equipment at DoD Aviation Maintenance Depots

Executive Summary

Introduction. Periodic weapon system modifications, replacements, and upgrades are required for a modern and well-equipped military. With those changes in the composition of weapon system inventories, with added emphasis on downsizing the military, and with the realignment of functions among and within the Military Departments, it is imperative that DoD aviation maintenance depots have effective management controls for identifying test, measurement, and diagnostic equipment (TMDE) that is necessary for maintaining weapon systems and that is available for redistribution or disposal. The audit evaluated about $193.3 million of TMDE on hand at three aviation maintenance depots in 1994.

Audit Objectives. The primary audit objective was to evaluate the effectiveness of the Military Departments' practices for identifying needed TMDE, redistributing excess items, and disposing of TMDE no longer needed because of obsolescence or modifications made to the supported weapon systems. The audit included an assessment of the effectiveness of plans for determining the feasibility of using the TMDE to support alternate weapon systems. Also, the audit evaluated the effectiveness of the applicable management controls and any incentives in place to encourage economical reutilization or disposition.

Audit Results. Generally, the Military Departments were identifying TMDE necessary for maintaining weapon systems, including evaluating the feasibility of using TMDE to support alternate weapon systems. However, the Military Departments could improve management controls for identifying obsolete and underutilized TMDE.

Idle and excess TMDE was not being effectively identified by the Military Departments at three of their aviation maintenance depots. The three aviation maintenance depots had $18.4 million of TMDE that was not properly identified or evaluated for potential redistribution, reutilization, or disposal.

Recommendations in this report, if implemented, will help to improve the Military Departments' controls for managing inventories of TMDE. We could not quantify the potential monetary benefits from improving procedures for management of TMDE. Appendix E summarizes the potential benefits of the audit. The management control program was inadequate in that a material weakness was identified (Appendix A).

Summary of Recommendations. We recommend that the Deputy Under Secretary of Defense for Logistics evaluate the cost-effectiveness of adding needed capabilities to the Depot Maintenance Standard System for monitoring TMDE utilization. We also recommend that the Military Departments establish controls to ensure implementation of existing guidance, and establish and implement standard operating procedures for using management information systems to identify underutilized TMDE at aviation maintenance depots.

Management Comments. The Assistant Deputy Under Secretary of Defense (Logistics Business Systems and Technology Development) concurred that a standard asset utilization capability is warranted. The Army concurred in principle with all the recommendations. The Army stated that it was taking appropriate steps to ensure fulfillment of the recommendations and that the revised standard operating procedures would be reviewed for completeness. The Navy did not respond to a draft of this report. The Air Force concurred with all recommendations. In response to the recommendation to require equipment managers to establish standard operating procedures for using management information systems to develop reports on equipment utilization, it stated that production foremen and engineers are required to periodically screen their equipment for underutilization. The Air Force further stated that it did not have an automation capability for recording utilization of TMDE and manually tracking thousands of items was not cost-effective.

See Part I for a summary of management comments and Part III for the complete text of management comments.

Audit Response. The Assistant Deputy Under Secretary of Defense (Logistics Business Systems and Technology Development) comments did not address the Depot Maintenance Standard System inter-Service and intra-Service capability to collect, evaluate, and disseminate utilization data for determining idle and excess TMDE for redistribution or disposal. The Army comments did not adequately describe the actions taken to implement each recommendation and did not provide a completion date for each action. The Air Force depot personnel were not conducting periodic reviews or using a management information system to identify idle and excess TMDE. For example, the San Antonio Air Logistics Center had not surveyed TMDE in more than 6 years. Selectively tracking high value equipment would not be cost prohibitive. We request that the Deputy Under Secretary of Defense for Logistics, the Army, the Navy, and the Air Force provide comments on the final report by October 23, 1995.

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Part I - Audit Results

Audit Background

Test, measurement, and diagnostic equipment (TMDE) is any device or system used to evaluate the operational condition of an end item of equipment, sub-assembly, part, or system to identify or isolate any actual or potential malfunction or out-of-tolerance condition. TMDE includes automatic test equipment, calibration equipment, manual electronic test equipment, and precision measurement instruments.

During the military buildup in the 1980s, the use of and investment in TMDE throughout DoD increased steadily, in part, because of the complexity of the modern weapon systems. Maintenance organizations in the Military Departments consider TMDE an element of general support equipment and, therefore, do not track the total DoD investment in TMDE as a separate commodity. The Corpus Christi Army Depot, Corpus Christi, Texas; the Naval Aviation Depot, Cherry Point, North Carolina; and the San Antonio Air Logistics Center, San Antonio, Texas, had about $863 million of general support equipment as of December 14, 1994. We evaluated $193.3 million of TMDE, in selective federal supply classes, on hand at the three aviation maintenance depots in 1994.

Periodic weapon system modifications, replacements, and upgrades are required for a modern and well-equipped military. With those changes in the composition of weapon system inventories and with added emphasis on downsizing and realignment of the military, it is imperative that DoD aviation maintenance depots have effective management controls for identifying TMDE that are necessary for maintaining the weapon systems, and identifying the TMDE available for redistribution or disposal.

Audit Objectives

The primary audit objective was to evaluate the effectiveness of the Military Departments' practices for identifying needed TMDE, redistributing excess items, and disposing of TMDE no longer needed because of obsolescence or modifications made to the supported weapon systems. The audit also assessed the effectiveness of plans for determining the feasibility of using the TMDE to support alternate weapon systems. Additionally, the audit evaluated the effectiveness of the applicable management controls and any incentives in place to encourage economical reutilization or disposition. Generally, the Military Departments were identifying TMDE necessary for maintaining weapon systems, including evaluating the feasibility of using TMDE to support alternate weapon systems. See Appendix A for a discussion of the scope, methodology, and management control program and Appendix B for a summary of prior coverage related to the audit objectives.

Management of Test, Measurement, and Diagnostic Equipment

Idle and excess TMDE was not being effectively identified by the Military Departments at three of their aviation maintenance depots. This condition occurred because the Military Departments did not follow existing guidance, did not establish standard operating procedures for using management information systems to identify underutilized equipment, and were reducing operating costs for administrative functions. As a result, the Military Departments' aviation maintenance depots had $18.4 million of TMDE that was not properly identified or evaluated for potential redistribution, reutilization, or disposal.

Policies and Procedures for TMDE

The Military Departments have integrated materiel managers or inventory management specialists located throughout their commands that have Service-wide visibility over general support equipment, including TMDE inventories and requirements. The inventory management specialists rely on equipment managers, equipment custodians, and other equipment specialists and officials at the Military Department aviation maintenance depots to identify and report excess, idle, or obsolete TMDE for redistribution, reutilization, or disposal. Each of the Military Departments has policies and procedures for the inventory management specialists and other personnel to follow in managing TMDE inventories at aviation maintenance depots. Appendix C describes the Military Department personnel involved, the related terminology, and the procedures used in managing TMDE. Appendix D summarizes the Military Departments' guidance on TMDE.

Management of TMDE

Idle and excess TMDE was not being effectively identified by the Military Departments at three aviation maintenance depots. Based on our review at the Corpus Christi Army Depot; the Naval Aviation Depot, Cherry Point; and the San Antonio Air Logistics Center, those aviation maintenance depots had about $18.4 million of TMDE that was not properly identified or evaluated for

potential redistribution, reutilization, or disposal. The conditions identified at each of the three aviation maintenance depots are discussed in the following sections.

Army

Corpus Christi Army Depot personnel reported that about $7.3 million of equipment was identified and turned in to the Defense Reutilization and Marketing Service of the Defense Logistics Agency for redistribution and disposal in FY 1994. Although the equipment turned in included some excess TMDE, the depot personnel could have identified or turned in an additional $3.1 million of idle TMDE by following existing guidance more effectively. The Corpus Christi Army Depot had $2.7 million in idle or excess TMDE that could have been identified by developing standard operating procedures for using the Army Installation Equipment Management System; $388,800 in obsolete TMDE that could have been replaced as part of the Army's Test Equipment Modernization program; and $46,300 in precision TMDE instruments that were excess to the depot's requirements.

Army Installation Equipment Management System Program. The equipment manager at the Corpus Christi Army Depot did not establish and execute an effective program for using and replacing equipment as prescribed by Army guidance for the Installation Equipment Management Program. Army Materiel Command Regulation 700-64, "Installation Equipment Management Program," September 21, 1990, implements Army Regulation 71-13, "The Department of the Army Equipment and Usage Program," June 3, 1988, on equipment usage. Army Materiel Command Regulation 700-64 provides a program of policies, procedures, and a management information system (the Army Installation Equipment Management System) for monitoring equipment utilization and for reporting excess equipment. In accordance with the regulation, the equipment manager at Corpus Christi is required to provide effective management of all installation equipment to include the authorization, acquisition, maintenance, modernization, use, redistribution, and turn-in of excess equipment. The equipment manager is required to review quarterly usage reports, ensure valid requirements existed for equipment not meeting quarterly usage reports, and promptly report excess equipment for redistribution, reutilization, or disposal.

The Corpus Christi Army Depot equipment manager was not maintaining utilization records for TMDE as required by Army Regulation 71-13. The regulation required Army equipment managers to determine the quarterly usage for TMDE equipment that exceeds $2,000 in value. Based on a sample of 434 TMDE items, 275 TMDE items, with a total value of $37.5 million,

exceeded $2,000 in value; yet the equipment manager did not maintain or retain any utilization records for this equipment. Consequently, the equipment manager could not monitor the usage of the TMDE and determine whether the TMDE was underutilized and reportable as excess.

From a sample of 434 TMDE items, the Corpus Christi Army Depot had 64 TMDE items that were idle and could have been turned in to inventory management specialists or the Defense Reutilization and Marketing Service for redistribution, reutilization, or disposal. Based on the evaluation of calibration records, visual checks of TMDE, and discussions with equipment operators, 60 TMDE items, valued at $1.5 million, were in the maintenance shops or in temporary storage and were not being utilized. Information, such as location and value, on the 60 TMDE items was recorded in the Installation Equipment Management System. However, the equipment manager had not developed any standard operating procedures for collecting utilization data on TMDE, for entering the utilization data into the system, and for using the system to track utilization of the TMDE items to assist the equipment manager in identifying and evaluating the idle TMDE for potential reutilization, redistribution, or disposal. The Corpus Christi Army Depot had four additional TMDE items, valued at $1.2 million, that were not recorded in the Installation Equipment Management System. Those four test sets were on the maintenance shop floor but were not in operation. The equipment manager stated that those four TMDE items were idle and excess but had not been processed by inventory management specialists for timely reutilization, redistribution, or disposal.

TMDE Modernization. The Corpus Christi Army Depot did not implement the Army's Test Equipment Modernization Program as prescribed in Army Regulation 750-43, "Army Test, Measurement, and Diagnostic Equipment Program," October 27, 1989. The Army initiated the Test Equipment Modernization Program in 1981 to improve materiel readiness of weapon systems, reduce TMDE proliferation and obsolescence, and reduce TMDE support costs. To facilitate the Test Equipment Modernization Program, the Program Manager for TMDE at the U.S. Army TMDE Activity, Huntsville, Alabama, periodically publishes a technical bulletin itemizing new TMDE that replaces technically obsolete TMDE.

The Corpus Christi Army Depot equipment manager did not review the technical bulletin, published in January 1991, that listed replacements for technically obsolete TMDE. As a result, the equipment manager did not identify 219 TMDE items, with an acquisition value of about $388,800, in the inventory that were technically obsolete and should have been replaced by newer TMDE. The 219 different TMDE items could have been replaced by 16 models, reducing administrative, storage, maintenance, and parts costs. The

Corpus Christi Army Depot had 6 of the 16 models on hand in addition to 90 obsolete TMDE items that the 6 newer models replaced. The 90 TMDE items that were obsolete cost about $3,600 annually in unnecessary calibration costs.

Precision TMDE Instrument Management. Corpus Christi Army Depot personnel were not following inventory control procedures prescribed in Army Pamphlet 710-2-1, "Using Unit Supply System (Manual Procedures)," February 28, 1994, and Technical Bulletin 750-25, "Maintenance of Supplies and Equipment: Army Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Repair Support Program," November 9, 1984, to minimize storage of unnecessary TMDE precision instruments. Precision TMDE instruments are required to be calibrated (measured accuracy of instruments using a known standard) at intervals listed in an Army technical bulletin issued by the U.S. Army TMDE Activity. To avoid unnecessary calibration costs, the TMDE support manager at the depot annotated precision TMDE instruments to be "calibrated-before-use" and placed the instruments that were not used routinely into temporary storage. Equipment managers, who perform calibration services, were required by the Army guidance to review and document TMDE in temporary storage every 6 months to establish the continued need for the instruments.

The Corpus Christi Army Depot personnel were not following the guidance in the Army technical bulletins and as a result they had 512 precision TMDE instruments, valued at about $46,300, that were excess. Those precision TMDE instruments were unused and were in temporary storage from 3 to 10 years. The equipment manager and custodians agreed that the idle and excess items were not required and began action to turn the items into supply in November 1994.

Another 986 precision TMDE instruments were reported on "calibrate-before-use" records although the instruments were not on the depot's property book records or maintained in the depot's inventory. The depot personnel had turned in those excess TMDE instruments to the inventory management specialists, but they did not adjust the associated "calibrate-before-use" records. Beginning in October 1994, the equipment specialists adjusted their "calibrate-before-use" records to delete the excess TMDE instruments that were turned in to inventory management specialists.

Navy

Personnel at the Naval Aviation Depot, Cherry Point, reported that idle and excess TMDE items, valued at about $3.8 million, were turned in to the Defense Reutilization and Marketing Service during FY 1994. The Navy personnel could have identified or turned in an additional $5.5 million of idle and excess TMDE and precision TMDE instruments at the depot by implementing better standard operating procedures and by following existing guidance more effectively. Based on a sample of 442 TMDE items, the Naval Aviation Depot, Cherry Point, had 90 TMDE items, valued at $5.4 million, that were idle or excess. The Naval Aviation Depot, Cherry Point, also had precision TMDE instruments, valued at $127,000, that were excess to the depot's requirements.

Identification of Idle and Excess TMDE. The equipment manager at the Naval Aviation Depot, Cherry Point, did not implement effective procedures for identifying idle and excess TMDE. Naval Air Systems Command Instruction 13650.1C, "Naval Air Systems Command Aircraft Maintenance Material Readiness List [AMMRL] Program," January 16, 1992, provides guidance for Individual Material Readiness List (IMRL) general support equipment that Naval Air System Command purchases and authorizes for the depot. Naval Aviation Depot Instruction 11016.1J, "Plant Property Acquisition, Inventory Control, and Disposal," August 31, 1994, provides guidance for capital assets and non-IMRL equipment purchased by the depot. In accordance with this guidance, the equipment manager, in coordination with equipment custodians at the depot, must monitor general support equipment requirements, including TMDE, and report any excess authorizations, allowances, or in-use equipment to the cognizant Navy offices for evaluation and disposition. Better standard operating procedures that include effective use of an available management information system, more complete periodic reviews of TMDE, and timely reporting of excess authorizations would assist the equipment manager in identifying idle or excess TMDE.

Use of Management Information System. Equipment custodians at the Naval Aviation Depot, Cherry Point, were not using their management information system to track and report the utilization of equipment to assist the equipment manager in identifying idle and excess TMDE. The equipment custodians had a Managed Facilities management information system available for recording all equipment located at the depot. The Managed Facilities management information system had the capability to identify underutilized TMDE. Although not required in Navy guidance, depot personnel began using the management information system to identify and code some idle equipment

after they discovered the Managed Facilities' capabilities in January 1994. However, the depot personnel's use of the Managed Facilities management information system was only partially effective.

Naval Aviation Depot Instruction 11016.1J, implements minimal general criteria in the Navy Comptroller Manual, Volume 3, Chapter 6, "Plant Property and Other Navy Property," September 10, 1993, for tracking utilization. The Navy Comptroller Manual requires that underutilized capital equipment (utilized less frequently than once every 90 days) be reviewed periodically to determine whether the equipment should be retained. After personnel at the Naval Aviation Depot learned of the management information system capabilities in January 1994, they began identifying underutilized TMDE by coding in the Managed Facilities management information system equipment that was placed in temporary storage.

Identifying TMDE in temporary storage provided a source of needed data on idle equipment for the equipment manager and custodians. However, the equipment manager had not developed standard operating procedures for using the management information system to alert the equipment manager or custodians to TMDE that was idle for excessive periods of time. Consequently, the equipment manager and custodians were not periodically evaluating the collected data in the management information system to determine whether underutilized TMDE should be retained, redistributed, reutilized, or disposed of. Also, the management information system did not identify underutilized TMDE that was idle in the maintenance shops. Instead of developing standard operating procedures for using the management information system effectively, the equipment manager relied on equipment custodians in the maintenance shops to identify underused and unnecessary equipment for redistribution and disposal based on the equipment custodians' observations and technical expertise.

IMRL Annual Reviews. The annual reviews of IMRL general support equipment conducted at the Naval Aviation Depot, Cherry Point, were not completely effective in identifying idle and excess TMDE. Naval Air Systems Command Instruction 13650.1C requires the Support Equipment Controlling Authority from the Naval Warfare Center Detachment Aircraft Controlling Custodian at Patuxent River, Maryland, to conduct asset inventory reviews of IMRL support equipment and ensure timely disposition or reutilization of assets that are excess to an organization's allowance. The Support Equipment Controlling Authority did conduct annual reviews of TMDE at the Naval Aviation Depot, Cherry Point, in accordance with Navy guidance. However, these annual reviews concentrated on determining variances in equipment authorizations and allowances, not on determining actual requirements by reviewing and evaluating the utilization and inventories of on-hand TMDE. Consequently, the annual reviews were not identifying all idle and excess

TMDE. Of the 90 TMDE items that we identified as idle or excess, 24 were non-IMRL TMDE items and 66 were IMRL TMDE items that were not identified during an annual review.

The annual reviews were primarily ineffective because the Support Equipment Controlling Authority could adjust the allowances or authorized quantities of TMDE to match the on-hand quantities of TMDE without documented support from depot personnel, such as an increase in work load. Authorizations for 30 TMDE items, of the 66 IMRL TMDE items that we identified as idle or excess, were unjustifiably increased. The Support Equipment Controlling Authority had increased the IMRL authorizations for the TMDE by accepting an oral request from the program manager for the IMRL program.

Reviews of TMDE in Temporary Storage. Equipment custodians at the Naval Aviation Depot, Cherry Point, did not perform periodic reviews of TMDE in temporary storage to determine whether the equipment was excess to the depot's requirements. The equipment custodians place TMDE in temporary storage when receiving and distributing new TMDE, and when TMDE is not required in the maintenance shops but is authorized for the depot. The Navy Comptroller Manual requires that capital assets be reviewed, at a minimum, every 3 years to determine whether the TMDE should be retained; however, because IMRL general support equipment is reviewed every year in accordance with guidance, IMRL equipment is excluded from this requirement. The Managed Facilities management information system reported about 5,100 items, valued at $47.4 million, in temporary storage at the Naval Aviation Depot, Cherry Point, as of December 14, 1994, which included IMRL TMDE, capital assets, and other non-IMRL support equipment.

Before September 1994, equipment custodians at the Naval Aviation Depot, Cherry Point, did not perform formal, scheduled reviews of TMDE in temporary storage to determine whether idle TMDE should be retained or disposed of. In December 1994, personnel began compiling a list of equipment, including TMDE, that was in temporary storage for more than 10 years to determine whether the equipment should be turned in for redistribution, reutilization, or disposal. The depot personnel identified 395 items, valued at $1.1 million, that needed evaluation for potential turn-in.

Of the 90 TMDE items we identified as idle or excess, 50 TMDE items were idle on the maintenance shop floors and 40 TMDE items were in temporary storage and could have been redistributed or disposed of. We believe this is a strong indicator that the temporary storage needs a thorough review to eliminate the TMDE that can be redistributed, reutilized, or disposed of.

Timely Notifications. The program manager for the IMRL program, who reports to the equipment manager, was not promptly notifying the Support Equipment Controlling Authority and the equipment custodians of unauthorized and potentially excess equipment at the Naval Aviation Depot, Cherry Point. Naval Air Systems Command Instruction 13650.1C requires the program manager for the IMRL program to notify the Support Equipment Controlling Authority of excess support equipment for disposition instructions, and then expeditiously transfer the excess support equipment when so directed. The program manager for the IMRL program was periodically notified of reductions in TMDE authorizations from the Support Equipment Controlling Authority. Although it was required for control purposes, the program manager for the IMRL program did not routinely notify the equipment custodians of the changes in authorizations. Consequently, the equipment custodians were unaware that they had excess TMDE that should have been identified and reported for disposition until the Support Equipment Controlling Authority made its annual review.

Idle TMDE. Of the total 442 items in our selected sample, the Naval Aviation Depot, Cherry Point, had 39 TMDE items, valued at $3.4 million, that were idle but were not evaluated for potential excess. The 39 idle TMDE items were authorized equipment used as backups or were in storage awaiting undetermined, projected work loads. The program manager for the IMRL program and equipment custodians had no documentation to show the work load for the idle equipment or procedures to measure the utilization of this equipment to determine whether work loads could be consolidated for TMDE. Consequently, although the idle TMDE was authorized, the program manager could not justify the TMDE.

Excess TMDE. Of the total 442 TMDE items in our selected sample, the Naval Aviation Depot, Cherry Point, had 51 TMDE items, valued at about $2 million, that were excess. The TMDE items were excess if the equipment was not in use, could not be justified by equipment custodians, and could not be reconciled to the IMRL of support equipment authorized for the Naval Aviation Depot, Cherry Point.

For example, the Naval Aviation Depot, Cherry Point, had two test fixture systems on hand, valued at $25,000 each. One of the test systems was in use on the maintenance floor while the other test system has been in storage since 1991. The naval aviation depot was authorized only one test set on its original IMRL. The Support Equipment Controlling Authority arbitrarily allowed the authorization to be increased to two test sets without any documented support that would have justified the increase. Therefore, we believe that the one test system could be redistributed to another Navy maintenance organization that had an unfilled requirement. In this case, records

indicated that the Commander, Naval Air Reserve Force, had a valid, unfilled requirement. The Naval Aviation Depot, Cherry Point, began transferring this test equipment in February 1995.

Precision TMDE Instrument Management. Personnel at Naval Aviation Depot, Cherry Point, did not implement procedures to effectively manage TMDE precision instruments and minimize storage of unnecessary precision TMDE instruments. Naval Operations Instruction 10200.1, "Policy Governing Tool Control Procedures," March 7, 1989, required the Naval Aviation Depot, Cherry Point, to conduct a "wall-to-wall" inventory of precision TMDE instruments at least every 3 years to identify overstocked items and evaluate the need to retain overstocked items. The personnel at the Naval Aviation Depot, Cherry Point, had not conducted a "wall-to-wall" inventory of precision TMDE instruments since 1985. Consequently, personnel at the Naval Aviation Depot did not identify excess precision TMDE instruments.

Personnel at the Naval Aviation Depot, Cherry Point, were unnecessarily storing 1,130 precision TMDE instruments, valued at about $127,000. Maintenance personnel at the depot had both backup and inactive inventories of precision TMDE in support of active inventories used in the maintenance shops. Maintenance shop managers for the precision TMDE instruments could not justify the inactive inventory. The managers stated that no evaluation was made to determine the continued need for inactive TMDE based on workload requirements, TMDE was not drawn from the inactive inventory, and the inactive inventory was redundant to the backup inventory. Consequently, the inactive inventory of precision TMDE instruments could be redistributed or disposed of.

Air Force

Air Force personnel were reducing equipment inventories at the San Antonio Air Logistics Center by ensuring that TMDE was turned in to the Defense Reutilization and Marketing Service for redistribution or disposal. However, they could have identified or turned in an additional $9.8 million of idle and excess TMDE by developing new standard operating procedures and by following existing procedures. Based on a sample of 115 TMDE items, the San Antonio Air Logistics Center had 29 TMDE items, valued at $8.7 million, that were idle and could be redistributed, reutilized, or disposed of. Based on a sample of 104 TMDE items from an Air Force listing of excess TMDE, the San Antonio Air Logistics Center had an additional 35 excess TMDE items, valued at $1.1 million, that Air Force inventory management specialists did not effectively evaluate for redistribution, reutilization, or disposal.

Identification of Idle TMDE. Equipment custodians at the San Antonio Air Logistics Center did not implement procedures for identifying, redistributing, reutilizing, or disposing of idle or excess TMDE. Air Force Manual 67-1, "Air Force Supply Manual," January 1, 1995, requires that equipment custodians monitor TMDE inventories and immediately report any excess authorizations, allowances, or in-use equipment to the local equipment management office for evaluation and disposition. Effective use of an available management information system and reimplementation of command equipment reviews would assist equipment custodians in identifying more idle and excess TMDE.

Use of Management Information System. Personnel at the San Antonio Air Logistics Center were not using their management information system to track and report the utilization of equipment to assist in identifying idle and excess TMDE. The Air Force G017 Equipment Data System is a computerized management information system that can identify TMDE that is not being utilized effectively. Although the option of using the Air Force G017 Equipment Data System to identify underutilized TMDE is available to personnel at the San Antonio Air Logistics Center, they are not required to use the system for that purpose. Personnel at the San Antonio Air Logistics Center stated that the Air Force Logistics Command (currently the Air Force Materiel Command) ended the requirement to track the utilization of equipment in 1986. That requirement has not been reestablished and no standard operating procedures for using the management information system to evaluate and report idle TMDE were developed.

Command Equipment Reviews. The Air Force Materiel Command Equipment Management Office at Wright-Patterson Air Force Base, Ohio, did not conduct reviews of equipment located at the San Antonio Air Logistics Center to ensure minimum essential authorizations and to identify idle and excess TMDE. Air Force Manual 67-1 requires that each Air Force command and base establish organizations to review and authorize equipment. Management teams from the Air Force Materiel Command Equipment Management Office are required to conduct periodic on-the-spot surveys of each base under its command to validate equipment requirements, ensure minimum essential authorizations of equipment, and ensure the maximum utilization of assets. Although the equipment management surveys, which include surveys of TMDE, provided valuable inventory controls, the Air Force Materiel Command Equipment Management Office had not conducted a survey at the San Antonio Air Logistics Center in more than 6 years.

The last equipment management survey at the San Antonio Air Logistics Center was a review of 49,700 equipment items, including TMDE, valued at about $285 million, conducted in March 1989. As a result of that survey, the Command Equipment Management Office directed the San Antonio Air Logistics Center to turn in 486 items, valued at about $2.8 million; to decrease authorizations for 564 equipment items, valued at about $2.5 million; and to

cancel 2 requisitions valued at $130,000. The Chief of the Air Force Materiel Command Equipment Management Office stated that no future surveys at San Antonio Air Logistics Center were planned.

Disposition of Idle TMDE. Equipment custodians at the San Antonio Air Logistics Center had about $8.7 million in idle TMDE that was not properly identified or turned in to inventory management specialists for redistribution, reutilization, and disposal. Based on a sample of 115 TMDE items, equipment custodians did not identify and turn in 20 idle TMDE items, valued at $4.6 million, to inventory management specialists for disposition instructions. The 20 TMDE items were idle because the work loads for that TMDE had either been transferred to other depots, had decreased, or had been discontinued; however, personnel did not identify the underutilized TMDE as idle. For example, in the fourth quarter of FY 1993 a model of the Events History Recorder for the F-100 and F-200 engines became obsolete. The TMDE that supported the recorder remained idle for more than a year after the end items were determined obsolete. However, six pieces of the idle TMDE, valued at $314,000, were not turned in to inventory management specialists and evaluated for disposition, redistribution, or reutilization. Equipment personnel agreed that most of the 20 TMDE items identified as idle were not needed and have initiated turn-in action for 7 of these items, valued at $802,000.

Of the 115 sampled items, another 9 TMDE items, valued at $4.1 million, were identified as idle, but were not processed timely and properly turned in and evaluated for redistribution, reutilization, or disposal. In one case, four TMDE items, valued at about $773,000, were never used at the San Antonio Air Logistics Center but were not turned in to the inventory management specialist for redistribution until 4 to 10 years after the equipment was delivered to the air logistics center. Air Force Manual 67-1 requires that equipment custodians immediately report excess authorizations to the equipment management office and turn in the excess equipment for reutilization or disposal. With effective standard operating procedures for using the management information system to identify and track utilization, and with periodic command reviews, this TMDE may have been identified for turn-in and evaluation.

Unnecessary Calibration of Idle TMDE. The San Antonio Air Logistics Center may have calibrated 9 TMDE items, valued at about $1.6 million, of the 115 items in our sample unnecessarily. Equipment custodians at the San Antonio Air Logistics Center calibrated five TMDE items that were not being utilized. Consequently, the equipment custodians incurred $2,240 of unnecessary costs. Three of the TMDE items were calibrated after disposal procedures were initiated. The remaining two items were calibrated although they were idle, were not identified for turn-in, and were not planned to be used.

Additional calibration costs may have been incurred for about $773,000 of TMDE that was never used. That equipment was required to be calibrated when it was delivered to the San Antonio Air Logistics Center. Equipment records indicated that the unused TMDE was calibrated 5 and 1/2 years after the date the equipment was delivered. Because historical calibration records were not kept, we could not determine whether that equipment was periodically calibrated from the time it was delivered. However, if the equipment was calibrated on its established cycle from the date of delivery, an additional $7,420 in calibration costs may have been incurred unnecessarily because the equipment was never used.

Evaluation of Excess TMDE. Inventory management specialists at the San Antonio Air Logistics Center did not effectively evaluate excess TMDE for redistribution or reutilization. Air Force Manual 67-1 requires that inventory management specialists evaluate excess assets for redistribution or reutilization throughout the Air Force. Inventory management specialists evaluate TMDE by reviewing Air Force Air Logistics Centers' listings of excess equipment and by using management information systems to screen TMDE assets held by the Defense Reutilization and Marketing Service.

Inventory management specialists at the San Antonio Air Logistics Center did not effectively evaluate the internal Air Force listings of excess items and initiate retention, redistribution, reutilization, or disposal actions for about $1.1 million of excess TMDE. Air Force Manual 67-1 requires that inventory management specialists review listings of excess equipment and initiate retention or disposal actions. Personnel from the Materiel Utilization and Control Office at the San Antonio Air Logistics Center were required to review the listings annotated by the inventory management specialists to ensure the specialists were complying with Air Force retention and disposal policies. Although inventory management specialists have other methods for identifying excess equipment, the listings provided detailed information, such as location, and prompted inventory management specialists to initiate retention or disposal actions.

From a sample of 104 TMDE items, 35 TMDE items, valued at about $1.1 million, were on a July 1994 Air Force listing of excess equipment that could have been used to fill outstanding Air Force-wide requisitions for TMDE. Because the Materiel Utilization and Control Office had been downsized and did not enforce the procedures in Air Force Manual 67-1, inventory management specialists were not reviewing the excess listing to fill requisitions, and were not disposing of excess TMDE to the Defense Reutilization and Marketing Service. Of the 35 TMDE items, 16, valued at about $441,000, that were on the July 1994 listing were still on the listing of excess equipment in February 1995. For 1 TMDE item, 2 requisitions went unfilled for about 8 months although the listing of excess equipment showed that the San Antonio Air Logistics Center had 90 TMDE items in excess that were in good, usable condition. Conversely,

the inventory management specialist took no action to reduce the excess TMDE items by redistribution or turn-in to the Defense Reutilization and Marketing Service.

Military Department Procedures for TMDE Inventories

The Military Departments were reducing operating costs by eliminating administrative functions necessary for controlling inventories of TMDE. The downsizing of DoD maintenance organizations resulted in the Military Departments reducing administrative personnel and relaxing administrative requirements for identifying and disposing of TMDE to lower maintenance depot operating costs. For the most part, equipment managers in the Military Departments believed that collecting, processing, and reviewing management data for identifying and redistributing or disposing of underused installation equipment and precision TMDE instruments was impractical, manpower intensive, and a low priority for management.

For example, the equipment manager at the Corpus Christi Army Depot stated that to comply with Army guidance, equipment custodians would be required to record and report utilization of some equipment manually. The evaluation of the utilization data would also require coordinated analyses by equipment custodians, specialists, and managers to determine appropriate management actions. The equipment manager stated that those methods were impractical to implement and required too much manpower. As an alternative, the equipment manager stated that he identified underused equipment by periodically walking through maintenance shops. The equipment manager did not document walkthroughs and could not support the efficiency or effectiveness of those walkthroughs in identifying idle and excess TMDE.

The Navy and Air Force managers expressed similar concerns and perspectives as those of the Army equipment manager in controlling TMDE inventories. The Navy and Air Force equipment managers added that inventory management specialists and equipment custodians were often too busy monitoring equipment transfers and disposing of supply stock items as a result of base closings and workload realignments and reductions to focus on identifying idle and excess retail and industrial equipment. Consequently, inventory management specialists were not always following standard operating procedures such as annual surveys of TMDE for identifying, reutilizing, and disposing of TMDE. Better use of existing management information systems and the implementation of a new, standard management information DoD-wide could alleviate the problems discussed by the equipment managers.

Depot Maintenance Standard System

The Depot Maintenance Standard System (DMSS) provides an opportunity for the Military Departments to implement an intra- and inter-Service automated information system capability that can determine equipment utilization and identify idle and excess TMDE. Under the direction of the Deputy Under Secretary of Defense for Logistics, the Joint Logistics Systems Center is managing the development and implementation of the DMSS. The DMSS evolved as a result, in part, of the Corporate Information Management initiative to improve, standardize, and integrate business processes throughout the DoD by consolidating automated data processing systems into standard information systems. DMSS will be developed as the standard DoD information system for depot maintenance functions.

Functional Applications. The DMSS will have several depot maintenance functional applications that include Project Management, Reparables Management, and Specialized Support project areas. The Facilities and Equipment Management System in the Specialized Support application will allow operators to collect utilization data, determine the utilization of a particular asset, and track the location, movement, and disposal of equipment items.

Inter-Service and Intra-Service Visibility. Although the Army, Navy, and Air Force have separate management information systems in which utilization data can be identified, some of these systems were not fully utilized and none provided inter-Service and full intra-Service visibility of TMDE. As a result, equipment custodians were not prompted to dispose of idle TMDE or reutilize TMDE located at other depots. Although the DMSS will have the capability to collect utilization data, planning for the system does not include effective coordination and use of the data for inter-Service and full intra-Service visibility.

DMSS Capabilities. The DMSS, as planned, will not have valuable capabilities for monitoring the utilization of TMDE and for determining idle and excess TMDE throughout the DoD. The criteria for determining asset utilization is not planned to be incorporated in the DMSS. The DMSS also will not have a programmed feature for identifying idle TMDE to operators for potential disposition or redistribution. System operators will have the discretion of adopting individual procedures for identifying idle TMDE within their DMSS access. Finally, DMSS may not provide utilization visibility throughout maintenance organizations because the Facilities and Equipment Management System application of DMSS is not planned to interface with other system applications located at different maintenance facilities.

Summary

The Military Departments aviation depots were not fully complying with their existing guidance or using management information systems to identify idle and excess TMDE, and to evaluate the TMDE for potential redistribution, reutilization, or disposal. By not following their guidance, the Military Departments aviation depots were overlooking valuable incentives for eliminating excess TMDE. Eliminating excess TMDE provides warehousing and maintenance shop space for newer equipment and changing work loads. Newer multifunctional equipment reduces TMDE proliferation and obsolescence, and reduces support costs. The Military Departments would also avoid unnecessary calibration costs for idle and excess TMDE. Additionally, identifying idle and excess TMDE would provide better asset visibility for planned purchases and reduce the potential for unnecessary procurements of TMDE. Those potential benefits warrant the Military Departments aviation depots making a greater commitment to eliminating excess TMDE than they have.

Recommendations, Management Comments, and Audit Response

1. We recommend that the Deputy Under Secretary of Defense for Logistics evaluate the cost-effectiveness of developing and implementing inter-Service, intra-Service, and standard asset utilization capabilities in the Depot Maintenance Standard System for collecting, evaluating, and disseminating utilization data on test, measurement, and diagnostic equipment for determining idle and excess equipment available for redistribution or disposal.

Assistant Deputy Under Secretary of Defense (Logistics Business Systems and Technology Development) Comments. The Assistant Deputy Under Secretary concurred that a standard asset utilization capability is warranted. The Assistant Deputy Under Secretary stated that the DMSS will provide full visibility of TMDE and that the Enterprise Information System within the DMSS has the capability to consolidate depot data at the Service or higher level.

Audit Response. The Assistant Deputy Under Secretary comments were unclear. Although the Assistant Deputy Under Secretary stated that the DMSS will provide visibility of facility and equipment assets at the Service or the DoD level, the comments did not specifically address the Depot Maintenance Standard System inter-Service and intra-Service capabilities for collecting, evaluating, and disseminating utilization data on TMDE. We determined that

the capability in the DMSS for monitoring the utilization of TMDE through inter-Service visibility would not be implemented at each depot. Therefore, depots would be unable to determine whether underutilized TMDE was available at other Service depots. We request that the Deputy Under Secretary of Defense for Logistics provide additional comments in response to the final report.

2. We recommend that the Commander, Army Materiel Command; the Commander, Naval Aviation Systems Command; and the Commander, Air Force Materiel Command, implement controls to ensure that maintenance personnel minimize inventories of test, measurement, and diagnostic equipment at aviation maintenance depots by requiring equipment managers to establish standard operating procedures for using management information systems to periodically develop reports on the utilization of equipment to assist the equipment manager in determining equipment that is idle and excess to the depot's needs.

Army Comments. The Army concurred in principle with the recommendations, stating that the Commander, Corpus Christi Army Depot (the Depot), is taking appropriate steps to ensure fulfillment of the recommendations. The Army Materiel Command will review the Depot's revised standard operating procedures for completeness by the end of the first quarter of FY 1996.

Audit Response. The Army comments were not fully responsive. The comments consolidated the actions taken for all recommendations and did not describe in sufficient detail the actions taken for each recommendation. We request that the Army provide additional comments in response to the final report.

Navy Comments. The Navy did not respond to the draft report.

Audit Response. We request that the Navy provide comments in response to the final report.

Air Force Comments. The Air Force concurred with the intent of the recommendation, stating that production foremen and engineers are required to periodically screen their equipment for underutilization. The Air Force further stated that tracking equipment utilization is not an automated process, and to manually collect and enter utilization data on thousands of equipment assets into an information system would not be cost-effective.

Audit Response. The Air Force comments were not responsive because the depot personnel were not conducting periodic reviews or using a management information system to identify idle and excess TMDE. Although the Air Force had a management information system, its policy requirement to track

equipment utilization in the management information system was rescinded in 1986. The requirement to track utilization using a management information system is optional for managers at the air logistics centers. We agree with the Air Force that collecting and entering utilization data on thousands of equipment assets into the management information system may not be cost-effective. However, tracking the utilization of high value assets could help alert managers to underutilized TMDE; and collecting and entering of limited, selective data into a management information system would not be cost prohibitive. Additionally, the Air Force will have the capability to automatically track utilization data when the DMSS is implemented at Service depots. The Air Force comments do not address the fact that the San Antonio Air Logistics Center had not surveyed TMDE for over 6 years. We believe our recommendation is still valid and request that the Air Force reconsider its position in response to the final report.

3. We recommend that the Commander, Army Materiel Command, and the Commander, Naval Aviation Systems Command, implement controls to ensure that maintenance personnel at aviation maintenance depots:

a. Periodically perform inventories of storage areas.

b. Reconcile equipment, including precision instruments, to equipment inventory records.

c. Periodically evaluate the continuing need for retention of equipment and precision instruments in storage.

Army Comments. The Army concurred in principle with the recommendation. See the Army comments on Recommendation 2. for details.

Audit Response. The Army comments were not fully responsive because the comments did not describe in sufficient detail the specific actions taken for this recommendation. We request that the Army provide additional comments in response to the final report.

Navy Comments. The Navy did not respond to the draft report.

Audit Response. We request that the Navy provide comments in response to the final report.

4. We recommend that the Commander, Naval Air Systems Command, implement controls for the depots that preclude the Support Equipment Controlling Authority from approving adjustments of equipment authorization levels without adequate justification and that assure timely reporting of changes in equipment authorizations and the reporting of resulting excess equipment.

Navy Comments. The Navy did not respond to the draft report.

Audit Response. We request that the Navy provide comments in response to the final report.

5. We recommend that the Commander, Air Force Materiel Command, instruct personnel in the Equipment Management Office to periodically conduct surveys of test, measurement, and dagnostic equipment located at aviation maintenance depots to validate equipment requirements, ensure minimum essential authorizations of equipment, and ensure the maximum utilization of equipment.

Air Force Comments. The Air Force concurred with the intent of the recommendation, stating that to comply with Air Force Manual 67-1, personnel in Air Force Materiel Command will perform periodic, annual equipment surveys of mission support equipment at command facilities.

Audit Response. The Air Force action satisfies the intent of the recommendation. However, the Air Force did not state when the annual surveys would be started or completed. We request that the Air Force provide a completion date in its response to the final report.

6. We recommend that the Commander, Corpus Christi Army Depot, implement controls to ensure that the Army's Test Equipment Modernization Program is accomplished.

Army Comments. The Army concurred in principle with the recommendation. See the Army comments on Recommendation 2. for details.

Audit Response. The Army comments were not fully responsive because the comments did not describe in sufficient detail the specific actions taken for this recommendation. We request that the Army provide additional comments in response to the final report.

7. We recommend that the Commander, San Antonio Air Logistics Center, implement procedures to ensure that inventory management specialists evaluate excess test, management, and diagnostic equipment for redistribution or reutilization by reviewing Air Logistics Centers' listings of excess equipment and by using management information systems to screen excess assets held by the Defense Reutilization and Marketing Service.

Air Force Comments. The Air Force concurred, stating that the San Antonio Air Logistics Center issued interim policy for inventory management specialists to use an alternative method to identify excess assets until erroneous data problems can be resolved for the listing of excess equipment. The San Antonio Air Logistics Center plans to resolve the erroneous data problems by

September 30, 1995. The San Antonio Air Logistics Center also provided detailed procedures in a FY 1995 policy letter for interrogating worldwide balances of items in the Defense Reutilization and Marketing Service for filling valid requirements prior to initiating purchase requests.

Audit Response. The Air Force actions are responsive to the intent of the recommendation.

Management Comments Required

Management comments to the final report are required from the addressees shown for the items indicated with an "X" in the chart below.

		Response Should Cover			
Number	Addressee	Concur or Nonconcur	Proposed Action	Completion Date	Related Issue
1.	DUSD(L)[1]	NR[4]	X	X	NA[2]
2.	Army	NR[4]	X	X	MC[3]
	Navy	X	X	X	MC[3]
	Air Force	NR[4]	X	X	MC[3]
3.	Army	NR[4]	X	X	MC[3]
	Navy	X	X	X	MC[3]
4.	Navy	X	X	X	MC[3]
5.	Air Force	NR[4]	NR[4]	X	MC[3]
6.	Army	NR[4]	X	X	MC[3]

[1]DUSD(L)=Deputy Under Secretary of Defense for Logistics
[2]NA=Not applicable.
[3]MC=Material management control weakness.
[4]NR=No further comment required.

Part II - Additional Information

Appendix A. Scope and Methodology

Scope and Methodology

We used nonstatistical sampling methods to select TMDE items on hand at one maintenance aviation depot in each Military Department. Maintenance organizations in the Military Departments consider TMDE an element of general support equipment and do not track the total DoD investment in TMDE as a separate commodity. Therefore, we reviewed TMDE in Federal Supply Classes 4920, 5210, and 6625 to evaluate the policies and procedures at the aviation maintenance depots for utilizing, redistributing, and disposing of the TMDE.

To evaluate the utilization, redistribution, and disposition of TMDE items, we examined inventory, calibration, workload, and disposal records for 1994. We interviewed equipment engineers, custodians, specialists, and managers; property book officers; program managers; inventory management specialists; and disposal personnel to determine the procedures and practices at maintenance organizations. We used the property accountability and calibration records for 1994 at each maintenance organization for evaluating the TMDE items.

Army. The Corpus Christi Army Depot had about 24,534 support equipment items, valued at $111 million. We evaluated 434 TMDE items, valued at $37.7 million, selected from the total support equipment on hand as of November 3, 1994. The Corpus Christi Army Depot also had about 11,000 precision TMDE instruments, valued at $2.2 million, on hand as of November 3, 1994. We evaluated 7,342 precision TMDE instruments, valued at about $731,000.

Navy. The Naval Aviation Depot, Cherry Point, had about 49,100 support equipment items, valued at $278 million. We evaluated 442 TMDE items, valued at $58.7 million, selected from the total support equipment on hand as of December 14, 1994. We also evaluated 9,686 precision TMDE instruments, valued at $1.3 million, on hand as of December 6, 1994.

Air Force. The San Antonio Air Logistics Center had about 28,000 support equipment items, valued at $474 million. We evaluated 115 TMDE items, valued at $90.9 million, selected from the total support equipment on hand as of August 25, 1994. We also evaluated 104 TMDE items, valued at about $4 million, on the San Antonio Air Logistics Center listing of excess TMDE as of July 31, 1994.

Use of Computer-Processed Data. We performed limited tests on the reliability of computer-processed data used by the Military Departments in disposing of and reutilizing TMDE. To the extent that we used and reviewed the computer-processed data, we concluded the data was sufficiently reliable to meet our audit objectives.

Audit Period, Standards, and Locations. We performed this economy and efficiency audit from July 1994 through February 1995 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. Accordingly, we included tests of management controls considered necessary. Appendix F lists the organizations we visited or contacted.

Management Control Programs

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 Control Programs. The audit evaluated management controls related to the disposition and reutilization of TMDE items at three Military Department aviation maintenance depots. Specifically, we examined the management control procedures for properly identifying underutilized TMDE, for promptly disposing of unneeded TMDE, and for effectively evaluating the reutilization of excess TMDE. We reviewed managements' self-evaluation programs as applicable to the management controls reviewed.

Adequacy of Management Controls. We identified a material internal control weakness for the Corpus Christi Army Depot; the Naval Aviation Depot, Cherry Point; and the San Antonio Air Logisitics Center as defined by DoD Directive 5010.38. The management controls at the three depots were not adequate to ensure that underutilized TMDE was identified; that the underutilized TMDE was evaluated to determine whether the TMDE was excess or not; and that the TMDE was appropriately retained, redistributed, reutilized, or disposed of. All recommendations, if implemented, will improve the three depots' procedures for identifying and processing idle and excess TMDE. Although we could not quantify the potential monetary benefits associated with managements' implementation of the recommendations, we did identify other potential benefits. See Appendix E for a summary of potential benefits resulting

from the audit. A copy of the report will be provided to the senior management officials responsible for management controls in the Army, the Navy, and the Air Force.

Adequacy of the Military Departments' Self-Evaluation of Applicable Internal Controls. The Army and Navy aviation maintenance depots did not report a material weakness in their Annual Statement of Assurance because the procedures used to identify and report the underutilization of TMDE was not an assessable unit in the Army, while the Navy maintenance depot assessed the utilization of property as a low risk in FY 1992. The Air Force aviation maintenance depot also did not report a material weakness in its Annual Statement of Assurance but identified materiel retention and disposal procedures as a moderate risk in one of the directorates at the San Antonio Air Logistics Center and had scheduled an internal management control review for that directorate for the fourth quarter of FY 1995. Therefore, the three maintenance organizations had not identified the processes for evaluating the underutilization of TMDE as a material weakness. The finding discusses details of the weakness.

Appendix B. Summary of Prior Audits and Other Reviews

The Inspector General, DoD, the Army Audit Agency, and the Air Force Audit Agency issued four audit reports in the last 5 years on subjects that are related to the disposition and reutilization of equipment. The four audit reports are summarized in the following paragraphs.

Inspector General, DoD

Inspector General, DoD, Report No. 92-095, "Acquisition and Management of Maintenance and Diagnostic Automatic Test Equipment," May 21, 1992, stated that the DoD Test Equipment Management Improvement Program's objectives for improving the acquisition and management of maintenance and diagnostic automatic test equipment have not been fully achieved. As a result, the proliferation of maintenance and diagnostic automatic test equipment has continued and the cost-effectiveness of acquisitions has been reduced. The report further identified that the objective to improve utilization of automatic test equipment had not been fully achieved and the Services may have missed opportunities to decrease acquisitions by using available underutilized equipment. The report recommended that comprehensive and uniform DoD-wide policy and guidance on the acquisition management of maintenance and diagnostic automatic test equipment be developed and implemented and that clear Office of the Secretary of Defense oversight responsibilities be established. The Office of the Secretary of Defense issued new policy on the management of automatic test equipment in April 1994.

Army Audit Agency

U.S. Army Audit Agency Report NR 93-1, "Test, Measurement and Diagnostic Equipment," January 4, 1993, stated that performance indicators for evaluating results of the calibration and repair support program were not effective at the U.S. Army Tank-Automotive Command. The audit report stated that uncalibrated equipment in temporary storage was reported as ready for use, that the delinquency rate for turning in equipment for calibration was understated, and that equipment availability data in management reports was misleading. The U.S. Army Audit Agency recommended that the U.S. Army Tank-Automotive Command properly compute availability of test equipment by

considering test equipment in temporary storage not available for use, emphasize that equipment owners follow established procedures for identifying new test equipment and for putting test equipment in temporary storage, conduct a 100-percent inventory of equipment and correct corresponding data records, and implement an effective training program for equipment coordinators. The U.S. Army Tank-Automotive Command generally agreed to take corrective action on the recommendations.

Air Force Audit Agency

Air Force Audit Agency Project 94061018, "Followup Audit - Management of Excess and Unserviceable Equipment," December 2, 1994, reported that the Air Force Materiel Command took effective action to notify air logistics centers that an excess or shortage report could assist them in redistributing items with coded retention authority. The retention authority for coded assets should terminate when the assets are required elsewhere, and the item management specialists should direct redistribution. Since notification, redistribution of excess equipment has increased. This report contained no recommendations.

Air Force Audit Agency Project 91061016, "Management of Excess and Unserviceable Equipment," November 29, 1991, stated that Air Logistics Center inventory management specialists did not redistribute and reutilize on-hand excess equipment to fill valid requirements for equipment valued at $22.1 million. Base-level personnel did not properly identify or report excess equipment nor effectively monitor unserviceable equipment. The Air Force Audit Agency recommended that the Air Force Logistics Command produce a retrieval system that identifies equipment items that are excess and the Air Force requirements for those equipment items. The Air Force Audit Agency further recommended that management initiate redistribution to satisfy equipment requirements. Management concurred with the recommendation but stated that the excess or shortage report was already available and identifies excess and shortage quantities worldwide.

Appendix C. Description of Military Department Terms and Procedures for Managing TMDE

Command Equipment Management Office. An office within each Air Force command that is responsible for issuing equipment authorizations and allowances, redistributing base funded items, and conducting inspections to ensure base-level equipment management procedures are operating effectively.

Defense Reutilization and Marketing Service. A primary level Defense Logistics Agency field organization that exercises program management and staff supervision of the DoD Personal Property Reutilization and Marketing Program. Responsibilities include managing all aspects of receiving, storing, maintaining, marketing, redistributing, and disposing of all materiel determined by elements of the DoD materiel management structure to be excess to the needs of the Department.

Equipment Custodians. Military Department personnel who maintain custodial responsibility for all in-use equipment on their accounts. Equipment custodians assist base supply personnel in conducting inventories; ensure all items in their account are present and serviceable; submit requests for equipment authorization and allowance changes; review custodian authorization and custody receipt listings to ensure their accuracy and completeness; report at once any excess authorizations, allowances, or in-use assets to the equipment management element; and notify the chief of supply when known equipment changes will cause future demands to increase or decrease.

Equipment Managers. A Military Department official who has responsibility for managing property, including TMDE, assigned to a military command. The equipment manager ensures that all command property is authorized, utilized, redistributed, modernized, and replaced in accordance with Military Department policies.

Equipment Specialists. Military Department personnel who provide technical management support and assistance to users, inventory management specialists, manufacturers, and repair and overhaul facilities. They perform a wide range of tasks requiring technical decisions and recommendations. They maintain cognizance, accomplish analysis, and prepare written communications on all materiel improvement projects, modifications, technical manuals, and deficiency reports.

Individual Material Readiness List (IMRL). An allowance list of aviation maintenance support equipment for an individual Navy organization that the organization is required and authorized to have in its inventory to accomplish its specific mission.

Installation Equipment Management System. A standard Army Materiel Command management information system for maintaining property accountability, scheduling preventive maintenance of equipment, and monitoring equipment utilization.

Integrated Materiel Manager. Any DoD organization that has been assigned wholesale integrated materiel management responsibilities. Integrated materiel management responsibilities include cataloging, requirements determination, procurement, distribution, overhaul, repair, and disposal of materiel.

Inventory Management Specialists. DoD personnel responsible for overseeing wholesale level inventory, purchasing goods to meet DoD requirements, and disposing of or reusing inventory for which they have management responsibility.

Materiel Utilization Control Office. That Air Force office is the focal point within each air logistics center responsible for implementation, control, and evaluation of procedures related to the utilization and disposition of TMDE in the Air Force.

Potential Reutilization or Disposal Materiel. Inventory identified for possible disposal but with potential for reutilization. Includes materiel that has the potential for being sent by an inventory manager to the Defense Reutilization and Marketing Service for possible reutilization by other DoD Components, Government agencies, or the general public.

Program Manager for the IMRL Program. A Navy industrial engineer responsible for the planning, acquisition, custody assignment and transfer, inventory control, recording and reporting, and disposition requirements of all IMRL equipment.

Project Manager. A Military Department official assigned responsibility for managing, planning, coordinating, and evaluating the design, development, testing, and deployment of a specific project.

Support Equipment Controlling Authority. Naval Commanders responsible for planning, directing, and controlling functions of the Aircraft Maintenance Material Readiness List Program, which includes maintaining IMRL asset inventory control and the redistribution of IMRL assets.

TMDE Support Center. A functional Army organization within the U.S. Army TMDE Activity that provides calibration and repair services for general and special purpose TMDE used at Army installations and depots.

TMDE Support Manager. An Army official who serves as the depot focal point of contact to oversee and ensure the overall effectiveness of the calibration and repair program for TMDE that is provided by the TMDE Support Center to the depot. The TMDE support manager monitors those operations for compliance with established TMDE policies and procedures.

Appendix D. Summary of Military Department Guidance on TMDE

Army Guidance

Army Regulation 71-13, "The Department of the Army Equipment Authorization and Usage Program," June 3, 1988, requires Army commanders and equipment managers to collect and review equipment utilization at maintenance organizations and report excess equipment.

Army Regulation 750-43, "Army Test, Measurement, and Diagnostic Equipment Program," October 27, 1989, provides policies and procedures for managing TMDE that includes guidance for reducing TMDE proliferation and obsolescence.

Army Materiel Command Regulation 700-64, "Installation Equipment Management Program," September 21, 1990, provides policy for managing Army installation equipment and defines installation equipment as all nonexpendable equipment other than real property, fixed plant communications equipment, and installed building equipment.

Army Technical Bulletin 750-25, "Maintenance of Supplies and Equipment: Army Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Repair Support Program," November 9, 1984, allows Army equipment managers to place precision TMDE instruments in temporary storage when no immediate need exists for the instruments.

Department of the Army Pamphlet 710-2-1, "Using Unit Supply System (Manual Procedures)," February 28, 1994, provides procedures for requesting, receiving, accounting for, issuing, and turning in equipment.

Navy Guidance

Naval Air Systems Command Instruction 13650.1C, "Naval Air Systems Command Aircraft Maintenance Material Readiness List [AMMRL] Program," January 16, 1992, provides procedures for controlling equipment inventories on the naval organizations' IMRL authorization, determining excess equipment, and redistributing support equipment.

Naval Operations Instruction 10200.1, "Policy Governing Tool Control Procedures," March 7, 1989, provides procedures for naval aviation depot personnel to identify and evaluate overstocked precision tools.

Naval Aviation Depot Instruction 11016.1J, "Plant Property Acquisition, Inventory Control, and Disposal," August 31, 1994, provides procedures for controlling inventories of depot plant property.

Navy Comptroller Manual, September 10, 1993, provides criteria for identifying underutilized plant property.

Air Force Guidance

Air Force Manual 67-1, "Air Force Supply Manual," January 1, 1995, requires organization commanders to eliminate nonessential equipment items in their inventories and equipment custodians to immediately report any excess authorizations, allowances, or in-use equipment to the equipment management office. The manual further requires that reutilization of excess items be evaluated by the inventory management specialists, Materiel Utilization Control Office, and the Defense Reutilization and Marketing Service.

Appendix E. Summary of Potential Benefits Resulting From Audit

Recommendation Reference	Description of Benefit	Amount and/or Type of Benefit
1.	Economy and Efficiency and Management Controls. Provides an automated information system capability that will enable the Military Departments to monitor utilization of TMDE to determine idle and excess equipment.	Monetary benefits could not be quantified. A cost analysis was recommended in the report to determine the monetary benefits.
2.	Compliance and Management Controls. Provides procedures to ensure that TMDE utilization is monitored for determining idle and excess equipment.	Nonmonetary.
3.	Compliance and Management Controls. Provides procedures for the Army and the Navy to identify excess TMDE and properly account for equipment.	Nonmonetary.
4.	Management Controls. Provides procedures for the Navy to ensure TMDE authorization levels are adequately justified and changes to the authorizations are reported timely.	Nonmonetary.
5.	Compliance and Management Controls. Provides oversight procedures for the Air Force to ensure that air logistics centers identify excess TMDE and properly account for equipment.	Nonmonetary.

Recommendation Reference	Description of Benefit	Amount and/or Type of Benefit
6.	Compliance, Economy and Efficiency, and Management Controls. Provides guidance for identifying and removing obsolete TMDE from inventories, which will save administrative costs.	Monetary benefits could not be quantified because the administrative costs for maintaining obsolete TMDE were not identified, accumulated, and evaluated by the depot.
7.	Compliance and Management Controls. Implements procedures to ensure that inventory management specialists properly monitor excess TMDE and act to redistribute or dispose of equipment.	Nonmonetary.

Appendix F. Organizations Visited or Contacted

Office of the Secretary of Defense

Office of the Under Secretary of Defense for Acquisition and Technology, Washington, DC
- Office of the Deputy Under Secretary of Defense for Logistics, Washington, DC
  - Joint Logistics Systems Center, Wright-Patterson Air Force Base, Dayton, OH

Office of the Under Secretary of Defense (Comptroller), Washington, DC

Department of the Army

Office of the Deputy Chief of Staff for Logistics, Washington, DC

Army Materiel Command, Alexandria, VA
- Aviation and Troop Command, St. Louis, MO
- Industrial Operations Command, Rock Island, IL
  - U.S. Army Materiel Command Installations and Services Activity, Rock Island, IL
  - Corpus Christi Army Depot, Corpus Christi, TX
- U.S. Army Test, Measurement, and Diagnostic Equipment Activity, Huntsville, AL

U.S. Army Safety Center, Fort Rucker, AL

Department of the Navy

Office of the Deputy Chief of Naval Operations for Logistics, Washington, DC

Office of the Deputy Chief of Naval Operations (Resources, Warfare Requirements, and Assessments), Washington, DC

Naval Air Systems Command, Arlington, VA
- Naval Aviation Depot Operation Center, Patuxent River, MD
- Naval Aviation Maintenance Office, Patuxent River, MD
- Naval Aviation Depot, Cherry Point, NC
- Naval Aviation Depot, Pensacola, FL

Naval Sea Systems Command, Arlington, VA

Department of the Air Force

Office of the Deputy Chief of Staff for Logistics, Washington, DC

Air Force Materiel Command, Wright-Patterson Air Force Base, Dayton, OH
- San Antonio Air Logistics Center, Kelly Air Force Base, TX

Equipment Allowance Flight Office, 78 Airbase Wing, Robins Air Force Base, GA

Defense Agencies

Defense Logistics Agency, Alexandria, VA
- Defense General Supply Center, Richmond, VA
- Defense Reutilization and Marketing Service, Battle Creek, MI

Appendix G. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
  Deputy Under Secretary of Defense for Logistics
  Director, Defense Logistics Studies Information Exchange
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  Deputy Chief Financial Officer
  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)
Auditor General, Department of the Army

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)
Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
Director, National Security Agency
  Inspector General, National Security Agency

Non-Defense Federal Organizations and Individuals

Office of Management and Budget
National Security and International Affairs Division, General Accounting Office
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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

Assistant Deputy Under Secretary of Defense (Logistics Business Systems and Technology Development) Comments

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000

ACQUISITION AND TECHNOLOGY
LBS

1995

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING, DOD

SUBJECT: Audit Report On Disposition and Reutilization of Diagnostic Equipment at DoD Aviation Maintenance Depots (OIG Project No. 4LB-0059)

Our review of the subject draft audit report has been accomplished with particular attention to the recommendation to evaluate the cost effectiveness of developing additional capabilities within the Depot Maintenance Standard System (DMSS) for identifying Test, Measurement, and Diagnostic Equipment (TMDE) data. The audit report states that although DMSS will have the capability to collect utilization data, planning for the system does not include effective coordination and use of data for interservice and intraservice visibility.

We concur that a standard asset utilization capability is warranted. DMSS will provide for full visibility of TMDE. Although DMSS and Facilities and Equipment Maintenance (FEM) will be migrated to support depot operations at the depot/shipyard/air logistics center level, the Enterprise Information System (EIS) within DMSS has the capability to consolidate depot data at the Service or higher level. FEM also has the capability to identify or provide visibility for facility and equipment assets at the Service or DoD level. In addition, the selected DMSS suite of migration systems provide the capability to inventory and monitor the utilization of all assets within each depot. The intraservice and interservice screening capability will be available upon the deployment of EIS to headquarters elements of the Services and DoD.

We appreciate the opportunity to provide comments concerning this draft audit. The DUSD(L)/LBS point of contact is Theresa Kuennen, (703) 274-4084.

M. E. Beattie
Assistant Deputy Under Secretary
of Defense (Logistics Business Systems
and Technology Development)

Department of the Army Comments

DEPARTMENT OF THE ARMY
OFFICE OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS
WASHINGTON, DC 20310-0500

DALO-AV 9500884L

1 AUG 1995

MEMORANDUM THRU

DEPUTY CHIEF OF STAFF FOR LOGISTICS

~~DIRECTOR OF THE ARMY STAFF~~

ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, LOGISTICS AND ENVIRONMENT)

Eric A. Orsini
Deputy Assistant Secretary of the Army
(Logistics)
OASA (I&L)

FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE (AUDITING)

SUBJECT: Audit Report on Disposition and Reutilization of Diagnostic Equipment at DoD Aviation Maintenance Depots (Project No. 4LB-0059)--INFORMATION MEMORANDUM

1. USAAA memorandum, 19 May 1995 (Tab A), asked ODCSLOG to respond to your memorandum of 17 May 1995 (Encl to Tab A). Your memorandum requested comments on the draft audit report.

2. Recommendations 2, 3 and 6. Concur in principle. The Commander Corpus Christi Army Depot (CCAD) is taking appropriate steps to ensure fulfillment of the recommendations stated above. Headquarters, U.S. Army Materiel Command will review the revised CCAD SOP for completeness. Projected completion of the review is end of first quarter FY 96.

Encl

ROBERT J. HORPES
Colonel, GS
Chief, Aviation Logistics Office

CF:
VCSA; SAAG-PRF-E

AMC (AMCIR-A) - Concur, Mr. Kurzer/274-9025 (by phone)
ATCOM (AMSAT-IR) - Concur, Mr. Huseman/693-3736 (by phone)

Department of the Air Force Comments

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, DC

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

FROM: HQ USAF/LGM

SUBJECT: Audit Report on Disposition and Reutilization of Diagnostic Equipment at DoD Aviation Maintenance Depots, May 17, 1995, Project No. 4LB-0059

This is in reply to your memorandum requesting the Assistant Secretary of the Air Force (Financial Management and Comptroller) provide Air Force comments on the subject report. We have reviewed the report and provide the following management comments on the recommendations pertaining to the Air Force:

Recommendation 2: We recommend that the Commander, Army Materiel Command; the Commander, Naval Aviation Systems Command; and the Commander, Air Force Materiel Command (AFMC), implement controls to ensure the maintenance personnel minimize inventories of test, measurement, and diagnostic equipment (TMDE) at aviation maintenance depots by requiring equipment managers to establish standard operating procedures for using management information systems to periodically develop reports on the utilization of equipment to assist the equipment manager in determining equipment that is idle and excess to the depot's needs.

AF management comments: Concur with intent. AFMC Instruction 21-109, Support and Industrial Operations Depot Facilities and Equipment, requires that the Depot Maintenance Business Areas periodically screen their equipment for underutilization and that equipment not required to support current workload be declared as excess and turned in. This is accomplished at the production shop level where the production foreman and engineer has intimate knowledge of the maintenance process and visibility of workload across equipment. When a piece of equipment becomes suspect for underutilization an in-depth analysis is made to determine its need. Current information systems do not allow tracking equipment utilization as an automated process. To do so would require that the daily usage of thousands of equipment assets be manually tracked, documented, and entered into an information system. The cumulative effect will be that thousands of man-hours will be expended with this effort to give indicators of what equipment should be further investigated for underutilization. We believe that implementing this would be a case of diminishing returns over the current process.

Recommendation 5: We recommend that the AFMC Commander instruct personnel in the Equipment Management Office to periodically conduct surveys of TMDE located at aviation maintenance depots to validate equipment requirements, ensure minimum essential authorizations of equipment, and ensure the maximum utilization of equipment.

AF management comments: Concur with intent. The continued downsizing, shortage of TDY funds, and new management concepts prevented the establishment of a Command Equipment Management Team to perform equipment surveys on a regular basis as required by AFM 67-1, Vol IV, Part One. To comply with AFM 67-1, HQ AFMC/LGS will perform limited, periodic, annual equipment surveys of mission support equipment located at AFMC facilities.

Recommendation 7: We recommend that the Commander, San Antonio Air Logistics Center (SA-ALC), implement procedures to ensure that inventory management specialists evaluate excess TMDE for redistribution or reutilization by reviewing Air Logistics Centers' listings of excess equipment and by using management information systems to screen excess assets held by the Defense Reutilization and Marketing Service.

AF management comments: Concur. Inventory management specialists (IMSs) need to evaluate their excess TMDE. SA-ALC/FM Policy and Guidance Letter on the Retention and Disposal Process instructs equipment IMSs to identify and evaluate excess assets using the D087N/D200.C, Computation Index of Actions. The D067 (Defense Materiel Utilization and Disposition Program Management System) Excess Review Lists are not currently used to identify excess assets due to an interface problem causing erroneous data to pass from the D087N (Equipment Item Classified Computation) to the D067 System. This interface problem is currently being worked at HQ AFMC/DRCS and is expected to be resolved by 30 Sep 95. Furthermore, SA-ALC has recently initiated policy regarding alternative procurement actions. This policy (SA-ALC/FM Policy Letter 014-95) provides detailed procedures for accessing the Interrogation Requirements Information System (IRIS) which provides worldwide balances of items held by the Defense Reutilization and Marketing Service. This access will allow the IMS to interrogate IRIS for excess assets that could possibly be used for filling valid requirements prior to/in lieu of Purchase Request initiation.

Questions may be directed to Mr Tom Girz, HQ USAF/LGMM, DSN 227-3859 or Ms Karen Miller, HQ USAF/LGSP, DSN 225-4859.

Marcelite J. Harris

MARCELITE J. HARRIS
Major General, USAF
Director of Maintenance

cc:
HQ AFMC/DR/LG

Audit Team Members

This report was produced by the Logistics Support Directorate, Office of the Assistant Inspector General for Auditing, DoD.

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