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FINAL REPORT

DESCOM TMDE MANAGEMENT PROGRAM

September 1978

Prepared for
U.S. ARMY DEPOT SYSTEM COMMAND
CHAMBERSBURG, PENNSYLVANIA
under Contract DAEA18-72-A-0005

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This report documents the objectives, technical approach, and results of the study. Appendix A contains the DESCOM TMDE Management Program Plan (DTMPP) which desribes the organization, responsibilites, and activites and provides for the establishment of a comprehensive DESCOM TMDE Program.

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Prepared for

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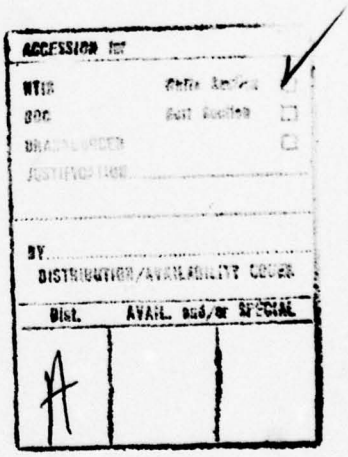
FOREWORD

This final report describes the work performed by ARINC Research Corporation between March 1978 and September 1978 for the U.S. Army Depot System Command (DESCOM), Chambersburg, Pennsylvania, under Contract DAEA18-72-A-0005, Delivery Order ZS01. The report presents the objectives, technical approach, and results of this study.

ARINC Research wishes to express its appreciation for the cooperation and assistance furnished by the following Tobyhanna Army Depot personnel: Messrs. William P. Morris, John P. Frace, James J. Gilhooley, Joseph W. Kaczmarek, Ross Occulto, John M. May, and Lt. Henry J. Marrangoni. We also wish to express our appreciation to Mr. Charles S. Plasterer of DESCOM for his invaluable assistance. In addition, we wish to thank the many DESCOM personnel whom we interviewed and/or obtained documents from during this study.



ABSTRACT

ARINC Research Corporation performed a six-month study to develop a Test, Measurement, and Diagnostic Equipment (TMDE) program for the U.S. Army Depot System Command (DESCOM). The major efforts of the study were to develop a DESCOM TMDE Management Program Plan and a DESCOM TMDE Supplement 1 to AR 750-43.

This report documents the objectives, technical approach, and results of the study. Appendix A contains the DESCOM TMDE Management Program Plan (DTMPP), which describes the organization, responsibilities, and activities and provides for the establishment of a comprehensive DESCOM TMDE Program. Appendix B contains the DESCOM TMDE Regulation (i.e., DESCOM Supplement 1 to AR 750-43), which directs the implementation of the DTMPP and establishes the purpose, scope, objectives, policies, and procedures of the program. Appendix C lists the DESCOM/depot personnel interviewed during the course of the study, Appendix D lists the documents reviewed, and Appendix E lists the DTMPP TMDE management responsibilities by functional areas.

SUMMARY

ARINC Research Corporation conducted a six-month study (beginning 13 March 1978) to develop a Test, Measurement, and Diagnostic Equipment (TMDE) program for the U.S. Army Depot System Command (DESCOM).

The overall objective of the study was to develop a TMDE management program for DESCOM. To accomplish this objective, the project was divided into five main tasks. The basis of this study consisted of technical data from a variety of publications and information obtained by means of structured interviews with key personnel at HQ DESCOM and four designated Army depots (Tobyhanna, Letterkenny, New Cumberland, and Anniston).

The two principal products of the study are a DESCOM TMDE Management Program Plan (DTMPP) and a DESCOM Supplement 1 to AR 750-43. The DTMPP established the organization, responsibilities, and activities for the management of DESCOM TMDE and is included as Appendix A to this report.

The DESCOM Supplement 1 to AR 750-43 directs the implementation of the DESCOM TMDE Management Program Plan and addresses DESCOM policies, objectives, and procedures for the life-cycle management of TMDE. Appendix B to this report contains the DESCOM TMDE Supplement.

The conclusions of this study are as follows:

- DESCOM does not have a command-wide, standardized, or established TMDE program in accordance with AR 750-43.
- DESCOM does not have a TMDE regulation (supplement) as required by the Department of the Army (DA) and the U.S. Army Materiel Development and Readiness Command (DARCOM). Rather, TMDE is managed as a part of other programs, such as Depot Maintenance Plant Equipment (DMPE).
- DESCOM has limited visibility of its TMDE assets because of asset-accounting procedures currently in use, e.g., items costing less than $1000 are not included in the Capability and Engineering Data Report Subsystem (CEDRS).
- Because of the absence of a command-wide DESCOM TMDE program, depot TMDE problems cannot be quickly resolved at the depot level or surfaced for resolution at the DESCOM level or higher.

- Compliance with DA and DARCOM TMDE regulations varies from depot to depot because each depot interprets the regulations differently and because the significance of TMDE as a production tool varies between depots.
- None of the depots visited have a comprehensive TMDE management program that compares favorably with either the requirements of the DA or DARCOM TMDE programs.
- The depot source document procedure responds too slowly to the needs of the depots in acquiring equipments to support production. While the DTMPP and DESCOM Supplement 1 to AR 750-43 will focus management attention on TMDE, thereby providing some relief in the acquisition of TMDE, they may not alter or significantly affect the existing source document procedure.
- The $1000 cost limitation for the equipment acquisition required to support the depot mission, which cannot be exceeded without *DESCOM* approval, restricts the ability of depot management personnel to meet production requirements in a timely and cost-effective manner.
- A reduction in the proliferation of TMDE through the standardization of makes and/or models could potentially improve the TMDE support system, reduce associated logistic support costs, decrease calibration and repair cycle turnaround times, and thus reduce non-availability of TMDE assets. Further, standardization that utilizes state-of-the-art TMDE will provide additional test and measurement capabilities and flexibility, thereby contributing significantly to production goals.
- The DTMPP (as described in Appendix A), after it has reached maturity, can be sustained within existing DESCOM personnel constraints, provided that supplemental funding is available for special projects. However, in order to implement the DTMPP, an effort three to five times the sustaining effort would be required.

On the basis of the results of this study, ARINC Research recommends the following:

- Implement a DESCOM TMDE Management Program Plan
- Issue a DESCOM Supplement to the DA and DARCOM Regulations on TMDE

Implementation of the above two recommendations will accomplish the following:

- Ensure compliance and compatibility of DESCOM with DA and DARCOM TMDE programs
- Establish a command-wide TMDE program
- Provide TMDE assets visibility
- Focus management attention on TMDE and provide methods for resolving TMDE-related problems.

- Reduce TMDE proliferation

The following two recommendations evolved as a result of this study and also affect non-TMDE equipments:

- The source document procedure process should be reviewed, analyzed, and adjusted so that it can become more responsive to the needs of the organization it is intended to serve.

- The $1000 cost-limitation figure should be increased to an amount that would compensate for the loss of buying power due to inflation since the establishment of that limit.

CONTENTS

CONTENTS (continued)

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

The U.S. Army Depot System Command (DESCOM) was activated on 1 September 1976 as a major subordinate command of the U.S. Army Materiel Development and Readiness Command (DARCOM). DESCOM is responsible for the command and control of DARCOM's 12 depots and 7 depot activities that provide support for all types and categories of U.S. Army materiel. One of the key tools used by the depots that significantly affects both mission accomplishment and cost-effectiveness of the depot support system is Test, Measurement, and Diagnostic Equipment (TMDE).

TMDE management is governed by U.S. Army Regulation (AR) 750-43, which establishes the requirement for an Army TMDE program with the objective of reducing TMDE logistics costs and improving overall mission performance in the Army. This AR has been supplemented by DARCOM, and each DARCOM major subordinate command has been directed to develop a TMDE program applicable to its respective mission.

To address this requirement, ARINC Research was tasked under Contract DAEA18-72-A-0005/ZS01 to develop a TMDE program for DESCOM. The contract covered a six-month period beginning 13 March 1978.

1.2 STUDY OBJECTIVES

The overall objective of the study was to develop a TMDE program for DESCOM. In order to accomplish the overall objective, the study was divided into two specific objectives:

- Prepare a DESCOM TMDE Management Program Plan. This plan was to describe the organizational structure, responsibilities, and activities required for the establishment of the DESCOM TMDE program.
- Prepare a DESCOM TMDE Regulation. This regulation was to provide the authorization for implementing the DESCOM TMDE Management Program Plan.

1.3 OVERVIEW OF WORK PERFORMED

A summary of the work performed in accomplishing the study objectives is described in the following tasks:

- Task 1 - Review and Analyze Current DESCOM TMDE Management Documentation. In this task, TMDE management documentation from DA, DARCOM, DESCOM, and selected depots was reviewed to identify and evaluate current DESCOM TMDE management procedures and DA and DARCOM TMDE program requirements.

- Task 2 - Review and Analyze DESCOM TMDE Management Programs and Problems. In this task, key individuals at selected depots were interviewed to determine if a TMDE program existed at any of these installations that could be used as the basis for developing a DESCOM TMDE program. During these interviews, comments were solicited concerning problems the depots were experiencing with respect to the overall management of TMDE.

- Task 3 - Prepare Draft DESCOM TMDE Management Program Plan. In this task, a comprehensive DESCOM TMDE Management Program Plan (DTMPP) was developed that established the objectives, organizational structure, and activities required to accomplish the DTMPP, and it assigned responsibilities for these activities (where appropriate) and for the life-cycle management of the DESCOM TMDE.

- Task 4 - Prepare Draft DESCOM TMDE Regulation. In this task, a DESCOM TMDE Supplement 1 to AR 750-43 was developed to provide the authorization for implementing the DESCOM TMDE Management Program Plan.

- Task 5 - Prepare Final Report. In this task, a final report was prepared that documents the objectives, technical approach, and results of the study.

1.4 REPORT ORGANIZATION

This report consists of four chapters. Chapter One presented the study background and objectives. Chapter Two addresses the technical approach used to investigate current DESCOM and depot TMDE management programs and problems and to develop the DESCOM TMDE Management Program Plan and the DESCOM TMDE Supplement. Chapter Three presents the results of the study effort, and Chapter Four presents the conclusions and recommendations. The following appendixes are presented to document the detailed results of the study:

- Appendix A - Draft DESCOM TMDE Management Program Plan
- Appendix B - Draft DESCOM TMDE Supplement 1 to AR 750-43
- Appendix C - List of DESCOM/Depot Personnel Interviewed
- Appendix D - List of Documents Reviewed
- Appendix E - List of TMDE Management Responsibilities

CHAPTER TWO

TECHNICAL APPROACH

The technical approach to achieving the project objectives involved five tasks:

Task 1 - Review and Analyze Current DESCOM TMDE Management Documentation

Task 2 - Review and Analyze DESCOM TMDE Management Programs and Problems

Task 3 - Prepare Draft DESCOM TMDE Management Program Plan

Task 4 - Prepare Draft DESCOM TMDE Regulation

Task 5 - Prepare Final Report

2.1 TASK 1: REVIEW AND ANALYZE CURRENT DESCOM TMDE MANAGEMENT DOCUMENTATION

In this task, current DESCOM TMDE management documentation and depot TMDE management procedures were reviewed and compared with DA- and DARCOM prescribed TMDE management programs. The purpose of the review and comparison was to identify and evaluate current DESCOM TMDE management procedures and to identify the requirements of the DA and DARCOM TMDE programs.

This task was divided into three steps as follows:

Step 1: Review Current DESCOM TMDE Management Documentation

Step 2: Review Current Depot TMDE Management Procedures

Step 3: Compare DESCOM and Depot TMDE Management Documentation With DA and DARCOM TMDE Regulations

2.1.1 Step 1: Review Current DESCOM TMDE Management Documentation

During this step a review was conducted of current DESCOM TMDE management documentation to determine TMDE acquisition processes, procedures, and sources. In addition, DESCOM authorization procedures were reviewed to determine which accounting controls were currently used within DESCOM.

2.1.2 Step 2: Review Current Depot TMDE Management Procedures

TMDE management procedures, as prescribed by the depots, were examined to identify current repair and calibration programs, replacement cycles, float authorizations, and requirements determination processes.

2.1.3 Step 3: Compare DESCOM and Depot TMDE Management Documentation With DA and DARCOM TMDE Regulations

To identify and evaluate DESCOM and depot TMDE management procedures, DESCOM and depot TMDE management documentation were compared with the following (complete titles and dates of documents reviewed are listed in Appendix D):

- AR 750-43. This DA regulation prescribes policies, establishes objectives and priorities, and assigns responsibilities for the life-cycle management of TMDE.
- DARCOM Supplement to AR 750-43. This supplement prescribes DARCOM policies and responsibilities related to life-cycle management of TMDE.
- AR 750-25. This DA regulation prescribes policies for assuring the reproducibility of precision measurements and accuracy of instruments used in support of Army materiel.
- TM 38-750-1. This manual provides procedures for the collection, processing, and utilization of maintenance and materiel readiness data at the field command level.
- TM 38-750-2. This manual provides for standardization of procedures for the input and exchange of logistic data with interested national agencies.

This comparison was accomplished to determine the degree of compliance and compatibility of the current DESCOM/depot TMDE program(s) with those required by DA and DARCOM. Two companion documents associated with AR 750-43 and the DARCOM Supplement 1 to AR 750-43 were also reviewed -- the DA TMDE Five-Year Program Plan and the DARCOM TMDE Five-Year Program Plan.

2.2 TASK 2: REVIEW AND ANALYZE DESCOM TMDE MANAGEMENT PROGRAMS AND PROBLEMS

In this task, DESCOM TMDE management programs and problems were reviewed and analyzed. Data collection centered around the following "areas of consideration":

- TMDE accountability
- Acquisition data
- TMDE repair and calibration cost
- New projected TMDE procurement

- Depot Five-Year Modernization Program Plans
- Depot source document procedures
- Duplication of functions when securing authorization for procurement
- Internal delay and duplication of capital equipment procurement
- Review $1000 cost limitation on procurement actions that the depot must not exceed without DESCOM approval

To accomplish Task 2, the following four steps were formulated:

- A list of questions was prepared based on the areas of consideration and the DA and DARCOM TMDE programs.
- Key personnel were interviewed at HQ DESCOM and at four depots (Tobyhanna, New Cumberland, Letterkenny, and Anniston), as selected by the Contracting Officer's Representative (COR).
- Documentation was obtained that related to TMDE programs at the depot.
- Data accumulated in previous steps were reviewed and analyzed.

The DESCOM and depot personnel interviewed are listed in Appendix C. In addition to the four depots visited, documentation was received from five other depots (Seneca, Sierra, Tooele, Sacramento, and Corpus Christi). The documents received from all of the depots are listed in Appendix D.

2.3 TASK 3: PREPARE DRAFT DESCOM TMDE MANAGEMENT PROGRAM PLAN

On the basis of the results obtained from Tasks 1 and 2, a DESCOM TMDE Management Program Plan (DTMPP) was developed, which involved five basic steps (as illustrated in Figure 2-1):

- Step 1: Define the objectives of the DTMPP
- Step 2: Define the functional areas that must be addressed in developing the DTMPP
- Step 3: Define the activities that must be accomplished to achieve the program objectives
- Step 4: Identify the organizational structure and personnel requirements necessary to implement the DTMPP
- Step 5: Assign TMDE responsibilities to key individuals and organizations

These steps are discussed in the following subsections.

2.3.1 Step 1: Define the Objectives of the DTMPP

The requirements for a specific TMDE program within DESCOM are based on the direction of higher authority, i.e., DA and DARCOM, and the need

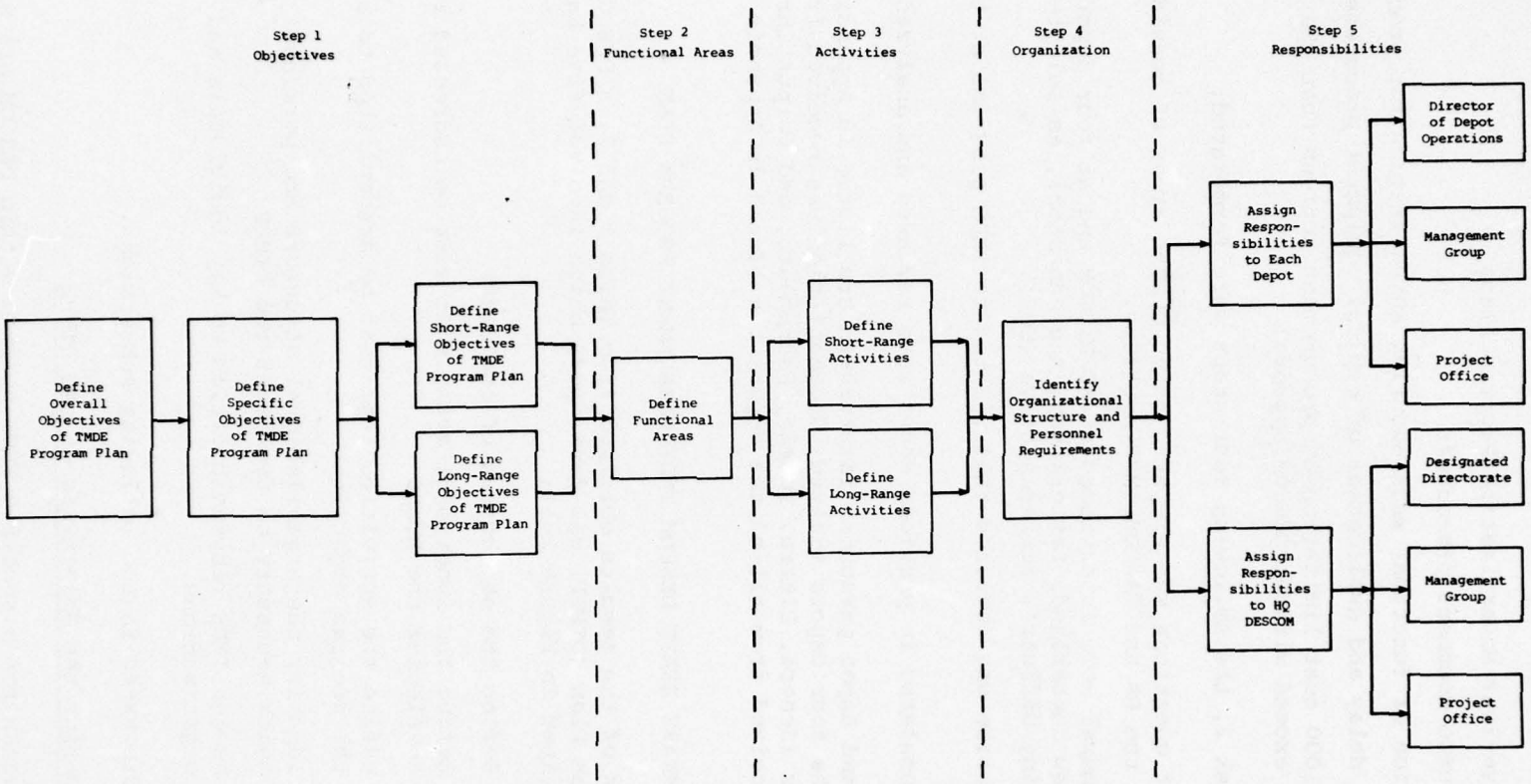


Figure 2-1. STUDY APPROACH TO DEVELOP DESCOM TMDE MANAGEMENT PROGRAM PLAN

for DESCOM to reduce logistic support costs in order to remain competitive. In addition, the test and measurement capabilities of DESCOM must be continually improved to meet the requirements of new systems and to increase productivity. These wants and needs are translated into objectives that form the initial and most important step in the development of a management program plan. The objectives provide direction to the organization(s) required to attain them and a yardstick by which management can measure and evaluate progress. Thus the progressive movement of specific coordinated objectives from higher to lower levels of management sets the target for and the authorization of detailed planning effort on the part of the receiving organization. The overall objectives of the Army TMDE program are stated in AR 750-43. The TMDE objectives of DARCOM are stated in DARCOM Supplement 1 to AR 750-43. These objectives were used as the basis in developing the overall and specific objectives of the DESCOM TMDE Management Program Plan. The specific objectives were further subdivided into short-range and long-range objectives to separate those which could be accomplished in less than one year and those which could take longer to achieve.

2.3.2 Step 2: Define the Functional Areas That Must Be Addressed in Developing the DTMPP

Because of the complexity of the TMDE program, it was subdivided into several discrete functional areas. These functional areas are the major elements of the plan that must be addressed to develop a comprehensive, integrated, and manageable program.

2.3.3 Step 3: Define the Activities That Must Be Accomplished to Achieve the Program Objectives

An activity is a task or job to be performed, and it is characterized by persons using resources for some period of time to accomplish a stated objective. Each of the functional areas was assigned specific activities that must be accomplished to achieve the specific objectives ultimately resulting in the attainment of the overall objective of the TMDE Management Program.

2.3.4 Step 4: Identify the Organizational Structure and Personnel Requirements Necessary to Implement the DTMPP

The functional operation of a TMDE program should be the responsibility of the normal supervisory staff and management personnel. The performance of specific functions may be assigned to one or more individuals who become a TMDE program-operating group. This program group acts in an advisory capacity; line management has the responsibility for the implementation of a TMDE program and for the effectiveness with which it is used. The number of persons required to implement and operate a TMDE program varies from organization to organization, depending upon such factors as complexity of the program, TMDE inventory size and number of separate makes or models, existing organizational structure, level of detail, and the degree of similarity between the TMDE program and existing procedures. The

complement of existing personnel is often sufficient once the program has an opportunity to mature. However, the initial implementation will require considerable resources to establish the baseline for the program.

This step was used to accomplish the following efforts:

- Use the above approach as general guidance for the introduction of a new element into an existing organization
- Review the existing organizational structure of HQ DESCOM and the four depots visited
- Review the policy requirements for designating an activity for TMDE matters in AR 750-43 (page 1-2, para 1-4j) and DARCOM Supplement 1 to AR 750-43

On the basis of the above guidance and analysis of the existing organizational structure and DA/DARCOM regulations, the DESCOM depot TMDE program organization and its personnel requirements were identified.

2.3.5 Step 5: Assign TMDE Responsibilities to Key Individuals and Organizations

This step utilized the results of Step 3 (defined activities) and Step 4 (organizational structure and personnel requirements) to define and assign responsibilities to individuals and groups.

By using the results of Steps 1 through 5, a draft DESCOM TMDE Management Program Plan was prepared. The draft was reviewed by the COR, and appropriate comments were included in the DTMPP.

2.4 TASK 4: PREPARE DRAFT DESCOM TMDE REGULATION

By using the results of Tasks 1 through 3, a draft DESCOM TMDE regulation (i.e., DESCOM supplement 1 to AR 750-43) was developed to provide the authority for implementing the DTMPP. It should be noted that both a regulation and a supplement, when approved, are authoritative documents. A supplement amplifies, clarifies, and/or expands the regulation that it is supplementing and is, therefore, a regulation. The distinction between the two is as follows: Supplemental procedures are used to promulgate command policies when a regulation exists on that subject matter from a higher headquarters. A regulation is used when there is no higher headquarters regulation on the subject matter to be promulgated.

Development of the DESCOM TMDE supplement involved three basic steps and are further discussed in Subsections 2.4.1 through 2.4.3.

- Step 1: Determine the type of document to be prepared
- Step 2: Determine the format of the supplement
- Step 3: Determine the contents of the supplement

2.4.1 Step 1: Determine the Type of Document to be Prepared

The initial consideration in preparing an authoritative document to implement the DTMPP for DESCOM was to determine the type of document (stand-alone regulation or supplement to a regulation of higher headquarters) that was required by existing DA and DARCOM regulations. The approach used in this step consisted of reviewing ARs 310-1, 310-2, and 310-3 (complete titles and dates of documents are listed in Appendix D), AR 750-43, DARCOM Supplement 1 to AR 750-43, and the DARCOM TMDE Five-Year Program Plan. On the basis of an analysis of these documents, it was concluded that a supplement to AR 750-43 is the type of document required.

2.4.2 Step 2: Determine the Format of the Supplement

The approach used in this step was to review AR 310-3, "Preparation Coordination and Approval of Department of the Army Publications", to determine the proper organization of the text material of a supplement.

2.4.3 Step 3: Determine the Contents of the Supplement

After the type and format of the document were determined (Steps 1 and 2), the approach constituted (1) reviewing the contents of AR 750-43 and DARCOM Supplement 1 to AR 750-43 to determine the extent to which these two documents covered the TMDE program requirements of DESCOM, (2) reviewing the contract statement of work to identify any contractual requirements, and (3) reviewing the DTMPP to identify requirements unique to DESCOM.

By using the results of the above steps, a draft DESCOM TMDE supplement was prepared. The draft was reviewed by the COR and appropriate comments included in the DESCOM Supplement 1 to AR 750-43 (attached as Appendix B to this report).

2.5 TASK 5: PREPARE FINAL REPORT

This final report was prepared to present the results of each task and the conclusions and recommendations of the study.

CHAPTER THREE

STUDY RESULTS

This chapter summarizes the study results of an effort to develop a TMDE program for DESCOM. The tasks are organized in accordance with the project task structure.

3.1 TASK 1: REVIEW AND ANALYZE CURRENT DESCOM TMDE MANAGEMENT DOCUMENTATION

Information applicable to TMDE-related problems at the DESCOM level was obtained from structured interviews. The information disclosed that DESCOM is a new Army Command and has not currently developed a TMDE program. Thus, DESCOM documents specifically addressing TMDE were not available for review. However, those TMDE costing more than $1000 are managed as part of other programs, e.g., the Depot Maintenance Plant Equipment (DMPE) Program. A review of a sample of the DMPE documents indicated confusion as to what should be classified as TMDE. For example, some items of equipment were erroneously categorized as TMDE. Further, because TMDE is not intensively managed as a separate commodity, TMDE asset visibility is limited, and the cost of supporting TMDE (i.e., calibration and repair costs) is not readily available. Asset visibility is limited because each depot can independently assign a different Management Control Number to the same TMDE under the Capability and Engineering Data Report Subsystem (CEDRS), which effectively prevents the consolidation of similar items across depots. In addition, TMDE costing less than $1000 are not included in CEDRS. Since many TMDE and TMDE accessories requiring maintenance and calibration support cost less than $1000, DESCOM cannot fully assess the extent of their TMDE assets. The cost of calibration and repair of TMDE is collected by the individual depots; however, these costs are not being consolidated at DESCOM. Consolidation of these costs would provide a more complete picture of TMDE support costs. Further, the cost of TMDE nonavailability and its impact on depot operations is unknown. Nonavailability refers to the time an item is awaiting repair services, calibration services, and/or repair parts and therefore is unable to meet or improve production goals. Because of the absence of a command-wide uniform DESCOM TMDE program, depot TMDE problems cannot be quickly resolved at the depot level or surfaced for resolution at the DESCOM or higher level.

Information on the depot TMDE management procedures concerning identification of current repair and calibration programs, replacement

cycles, float authorization, and requirement determination processes was obtained from interviews with key individuals (see Appendix C) and from depot documents (see Appendix D).

Analysis of the information obtained from visits to the four selected depots and review of the documents received from the five other depots indicated that the nine depots had procedures that included TMDE as a part of the Depot Maintenance Plant Equipment (DMPE) program. However, none of the depots had a program specifically designed for TMDE. In addition, compliance with DA and DARCOM TMDE regulations varied from depot to depot as discussed below.

The following information was obtained from visits to the four selected depots:

- TMDE Acquisition Processes, Procedures, and Sources. Three out of four depots cited AMCR 750-2, "Depot Maintenance Plant Engineering Equipment Program", as the document used to acquire TMDE. This regulation prescribes policies, responsibilities, and procedures for establishing a DMPE program, and it applies to all TMDE (defined as DMPE) required for depot maintenance operation. A separate TMDE program regulation was not available.
- Depot Repair and Calibration Programs. All depots visited and those which provided documents have a calibration program based on AR 750-25, DARCOM Supplement 1 to AR 750-25 or DARCOM-R 702-7. These programs, while not uniform, are similar to each other.
- Replacement Cycles. Analysis of the available Five-Year Modernization Plans indicated that the replacement of DMPE is based primarily on wear and age of the equipment
- Float Authorization. None of the depots had a TMDE float authorization; however, it was generally agreed that a TMDE float could reduce production stoppages or slowdowns.
- Requirements Determination Process. All depots indicated that they use AMCR 750-2 to develop their Five-Year Modernization Plans, which contains the projected DMPE requirements. These projected requirements were based primarily on wear and age of the equipment.

The planned comparison of DA/DARCOM documents with DESCOM documents could not be made because of the nonexistence of the latter. Comparisons between DA/DARCOM documents and depot documents revealed the following:

- None of the depots have a comprehensive TMDE program that would compare favorably with the DA or DARCOM TMDE programs.
- All of the depots have a calibration program based on AR 750-25.
- Three out of four depots indicated that TMs 38-750-1 and -2 are not applicable to their operation. However, a review of the purpose, scope, and objectives of these documents indicated that TM 38-750-1 is applicable, at a minimum, to those depots with a

calibration and repair mission. TM 38-750-2 is not applicable within DESCOM. Further, the implementation of TM 38-750-1 within DESCOM would provide a uniform maintenance management system that would be inclusive of TMDE.

- Letterkenny Army Depot uses LEAD Regulation 750-21, "Test, Measurement, and Diagnostic Equipment", which applies only to the acquisition of TMDE. In addition, it also uses Standard Operating Procedure 725-6(MM), which applies to all production capital equipment (including TMDE) for annual, emergency, and excess requests where the acquisition cost is $1000 or more.

Review of the documents received from the five other depots revealed the following:

- One depot (Corpus Christi) has a procedure on TMDE, covering the acquisition of TMDE and the use of DA Forms 4062-R and 4062-1-R. The other four depots did not furnish any documentation on TMDE management programs.

- Four of the depots (except Sacramento) furnished documentation on their calibration programs.

3.2 TASK 2: REVIEW AND ANALYZE DESCOM TMDE MANAGEMENT PROGRAMS AND PROBLEMS

Table 3-1 was developed from the DESCOM/depot interviews and depicts the nine areas of consideration. The nine areas of consideration are listed in the left column, the next column contains the organizations visited, and the third column contains a list of the documents that the organization considered applicable to the respective area of consideration. The last column contains the problem areas submitted by the depot personnel. The overall results of the task indicated the following:

- The depots do not have a program directed exclusively to TMDE.

- The only problems mentioned by all of the depot personnel were the delays caused by the source document procedure and the $1000 cost limitation (which cannot be exceeded without DESCOM approval).

The DTMPP can be expected to provide some relief for TMDE as far as the source document procedure is concerned, and this can be accomplished by focusing management's attention on TMDE through the DTMPP and the DESCOM Supplement 1 to AR 750-43. However, the DTMPP may not alter the source document procedure itself, which appears to be burdensome, time-consuming, and complex. Further, since the source document procedure is unsatisfactory to depot management personnel, it may also be counter-productive by creating a seemingly insurmountable barrier of paper work and procedures and thus may hamper production improvements. The entire source document procedure process should be documented (in one document), reviewed, analyzed, and adjusted so that it is more responsive to the needs of the organizations it is intended to serve.

Table 3-1. REVIEW AND ANALYSIS OF THE AREAS OF CONSIDERATION

Areas of Consideration	Organization	Procedural Documentation	Problem Areas
TMDE Accountability	DESCOM	AMCR 750-28 and CEDRS	None
	TOAD	AR 710-2, AMCR 750-2, and HRs (Hand Receipts)	None
	LEAD	AR 750-43, TDA, Depot Regulations 700-82, 750-21, and HRs	None
	NCAD	AR 750-43, AR 310-49, NCADR 750-11, and HRs	None
	ANAD	AR 750-43, AMCR 750-2, ANAD-R 735-1, 750-5, 310-4, and HRs	None
Acquisition Data	DESCOM	Depot Source Documents	None
	TOAD	AMCR 750-2 and Depot Regulation MD-7	Source document procedure delays
	LEAD	AR 750-43, AMCR 750-2, LEAD-R 750-2, and 700-82	Source document procedure delays
	NCAD	SB 700-20 and AMDF File	Source document procedure delays
	ANAD	AMCR 750-2 and ANAD-R 750-5	None
TMDE Repair and Calibration	DESCOM	N/A	N/A
	TOAD	AR 750-25, TB 750-25, and Computer Listings	Large backlog
	LEAD	Calibration Computer Listings	None
	NCAD	AR 750-25	Outdated depot calibration standards equipment
	ANAD	AR 750-25	Unavailability of technical publications
New Projected TMDE Procurement	DESCOM	Depot Five-Year Modernization Plan	None
	TOAD	TOAD Five-Year Modernization Plan	Source document procedure delays
	LEAD	AMCR 750-2 and LEAD Five-Year Modernization Plan	Source document procedure delays
	NCAD	NCAD Five-Year Modernization Plan	No contact with item managers and TDA delays
	ANAD	ANAD Five-Year Maintenance Plan	Source document procedure delays
Depot Five-Year Modernization Programs	DESCOM	Depot Five-Year Modernization Plan	None
	TOAD	TOAD Five-Year Modernization Plan	Source document procedure delays and $1,000 cost limitation
	LEAD	AMCR 750-2 and LEAD Five-Year Modernization Plan	Same as new projected TMDE procurement
	NCAD	DARCOM and NCAD Five-Year Maintenance Plan	Same as new projected TMDE procurement
	ANAD	AMCR 750-2 and ANAD Five-Year Modernization Plan	Same as new projected TMDE procurement
Depot Source Document Procedure	DESCOM	Draft Depot Five-Year Modernization Plan Regulation	None
	TOAD	AMCR 750-2, TOAD-R 700-6, 735-10, and MD-7	Source document procedure delays
	LEAD	LEAD-R 700-82, 750-21, and Depot SOP 725-6	Source document procedure delays and $1,000 cost limitation
	NCAD	NCAD-R 750-11	Source document procedure delays
	ANAD	ANAD-R 750-5	Source document procedure delays
Duplication of Functions When Securing Authorization for Procurement	DESCOM	None	N/A
	TOAD	AR 750-43, AMCR 750-2, and Depot Regulation MD-7	Requisition procedures (i.e., Form 316)
	LEAD	AR 750-21	None
	NCAD	NCAD-R 750-1 and DARCOM Supplement 1 to AR 750-43	Source document procedure delays
	ANAD	ANAD-R 750-5 and 735-7	None
Internal Delay and Duplication of Capital Equipment Procurement	DESCOM	None	N/A
	TOAD	AR 750-43, AMCR 750-2 and Depot Regulation MD-7	Requisition procedures
	LEAD	Depot SOP 725-6	None
	NCAD	AMCR 750-2 and NCAD-R 750-11	None
	ANAD	ANAD-R 735-1	Duplication may exist
Review $1,000 Cost Limitation the Depot Must Not Exceed Without DESCOM Approval on Procurement Action	DESCOM	No Control - DA Policy	N/A
	TOAD	AMCR 750-2 and Depot Regulation MD-7	Source document procedure delays and $1,000 cost limitation too low
	LEAD	AMCR 750-2	Source document procedure delays and $1,000 cost limitation too low
	NCAD	AMCR 750-2	Source document procedure delays and $1,000 cost limitation too low
	ANAD	ANAD-R 735-1	Source document procedure delays and $1,000 cost limitation too low

Note: DESCOM - U.S. Army Depot System Command, TOAD - Tobyhanna Army Depot, LEAD - Letterkenny Army Depot, NCAD - New Cumberland Army Depot, ANAD - Anniston Army Depot.

The exact origin of the $1000 cost limitation on the acquisition of equipments (not to be exceeded without DESCOM's approval) could not be determined during the course of the study. However, it is believed to be the direct result of AR 310-49, which requires nonexpendable items costing more than $1000 to be processed for type classification or type-classification exemption and included in the TDA.

It is not the purpose of this study to comment on AR 310-49 or the $1000 cost limitation established for the type-classification process; thus comments will be confined to the $1000 cost limitation imposed on equipment acquisition. The buying power of $1000 has greatly deteriorated because of inflation over the past several years. By maintaining the $1000 cost-limitation figure, the ability of depot management personnel to meet production requirements in a timely and cost-effective manner will continue to be reduced on an annual basis. Therefore, the $1000 cost-limitation figure should be continually reviewed and increased to an amount that incorporates the effects of inflation.

During visits to the depots, the following observations were made and were generally confirmed during the interviews:

- There is a proliferation of general purpose TMDE makes and/or models (M/M) (e.g., several different M/M of oscilloscopes and multimeters were used throughout the depots). In many cases, they could typically be replaced by one M/M of an oscilloscope or multimeter. The reduction in the number of separate M/M through a standardization process could improve the TMDE support system and reduce overall logistics cost at the depots.
- The different TMDE M/M extended from the latest state-of-the-art technology to the outdated technology (i.e., from digital to tube), which complicates the TMDE support system. As a general rule, state-of-the-art TMDE have longer mean time between failures and longer intervals between required calibration, thereby contributing to a reduction in logistic support costs.
- The proliferation of TMDE contributes to the backlog or long turnaround times experienced during the calibration and repair cycles, which in turn contributes to the nonavailability of TMDE assets.
- Across-the-board, state-of-the-art TMDE exhibits greater test and measurement capabilities that contribute significantly toward improving production goals than does tube-technology TMDE.

3.3 TASK 3: PREPARE DRAFT DESCOM TMDE MANAGEMENT PROGRAM PLAN

The task results are presented in Figure 3-1, which provides an overview of the entire DESCOM TMDE Management Program Plan (DTMPP). The figure is arranged to show the overall and specific objectives of the plan at the top. The specific objectives have been further expanded into eight groups consisting of short- and long-range objectives, which were then organized

into functional areas. Below each functional area is a series of short- and long-range activities that must be accomplished to achieve all preceding objectives.

The specific responsibilities associated with the short- and long-range activities in each functional area are listed in Appendix E. In Appendix E, the responsibilities are first segregated by functional area and then, within each functional area, by the office or group of the proposed TMDE Management structure. Thus, Figure 3-1, in conjunction with Appendix E, provides an overview of the responsibilities, activities, and objectives required to implement the DTMPP in accordance with applicable regulations. Therefore, they demonstrate the logical flow of responsibilities to the activities that must be accomplished in each functional area to achieve the objectives of the DTMPP. In essence, they are a top-down/bottom-up diagram of the entire DTMPP and can be used as a vehicle for promoting understanding of the DESCOM TMDE program.

The complete Draft DESCOM TMDE Mangement Program Plan is included as Appendix A.

It is emphasized that the DTMPP was designed not only as an overall plan for implementing a comprehensive TMDE program for DESCOM but as a means of correcting or alleviating the problems associated with the "areas of consideration" addressed in Table 3-1. Table 3-2 presents the correlation of the areas of consideration with representative activities of the DTMPP, which, when accomplished, should provide solutions to identified DESCOM TMDE problems.

On the basis of experience gained during the development and administration of the U.S. Army Communications Command (USACC) TMDE program, the level of effort required to implement the DTMPP would be three to five times that required to sustain the program once it has reached maturity. Maintaining a mature DTMPP could most likely be accomplished within existing DESCOM personnel constraints, assuming that adequate funding was provided for special projects. Full-time personnel would be required to direct the program through the implementation stage. These personnel must have a working knowledge of TMDE and depot procedures, in addition to understanding the interaction and applicability of the three TMDE programs they would be working with, i.e., DA, DARCOM, and DESCOM TMDE programs. Further, they would require an understanding of those portions of the total Army system, e.g., acquisition, life-cycle cost, maintenance management, and authorization documents and procedures, which influence or affect TMDE management.

3.4 TASK 4: PREPARE DRAFT DESCOM TMDE REGULATION

As a result of the review of the selected publications, the following information was obtained:

- Army Regulations generally will contain adequate direction and guidance for the intended user level so that the issuance of agency or command supplements is not required. However, in some cases

Establish Overall Objective				Implement a DTMPP
Define Specific Objectives				• Enhance Depot Overh • Increase Depot Prod • Standardize DESCOM
Develop Short-Range Objectives	• Issue DTMPP • Issue DESCOM TMDE Requlation • Identify DESCOM TMDE Organization • Determine TMDE Performance Assessment Requirements • Develop DESCOM TMDE Five-Year Management Program Plan	• Establish TMDE Accountability Procedures	• Develop TMDE Acquisition Policy Procedures	• Implement DES Preferred Ite (PIL) Concept
Develop Long-Range Objectives	• Develop and Implement TMDE Performance Assessment System • Implement DESCOM TMDE Five-Year Management Program Plan		• Implement TMDE Replacement Program	• Publish TCR L Engineering A • Initiate and Depot Support (TMDE)
Organize Into Functional Areas	Program Management	Assets Accountability	Acquisition Process	Preferred List (PI
Identify Short-Range Activities To Be Accomplished	• Issue DIMPP • Issue TMDE Regulation • Establish DTPMO • Established DPTPMO • Establish DTMG • Establish DPTMG • Determine TMDE Performance Assessment Requirements • Develop DESCOM TMDE Five-Year Management Program Plan • Develop TMDE Reports Subsystem • Interface with Program Managers of New Systems • Review Depot Missions, Goals, and Objectives • Evaluate Effectiveness of Subsystems	• Define Reportable TMDE • Define TMDE Supportability Criteria • Develop Assets Accountability Subsystem • Inventory Current TMDE Assets • Analyze Inventory of Current TMDE Assets • Reassess Depot TMDE Requirements	• Develop TMDE Acquisition Policy and Procedures • Publish TMDE Acquisition Policy and Procedures • Develop Forecast and Schedule for Replacement of TMDE	• Establish Int DESCOM PIL • Establish PIL Criteria • Develop DESCO
Identify Long-Range Activities To Be Accomplished	• Develop TMDE Performance Assessment System • Implement TMDE Performance Assessment System • Implement DESCOM TMDE Five-Year Management Program Plan • Submit Quarterly Activities Reports to DARCOM	• Change TDA to Reflect DESCOM PIL	• Refine TMDE Acquisition Process • Acquire New PIL TMDE Using Available Funds • Implement TMDE Replacement Program	• Determine Dep Program (TMD ments • Develop TMDE Aids Document • Develop TCR • Continually Update DESCO • Implement De Program (TMD
Assign Responsibilities By Office/Group	See Appendix E, Program Management, page E-1	See Appendix E, Assets Accountability, page E-3	See Appendix E, Acquisition Process, page E-4	See Appendix E, Items List (PIL

Figure 3-1. EVOLUTION OF DESCOM

plement a DTMPP in accordance with AR 750-43 and DARCOM Supplement 1 to AR 750-43				
nce Depot Overhaul and Repair Capability ease Depot Productivity dardize DESCOM TMDE				
• Implement DESCOM TMDE Preferred Items List (PIL) Concept	• Develop DESCOM TMDE Assets Funding Policy and Plan	• Improve Cost-Effectiveness of TMDE Support	• Establish an ATE Program	• Develop TMDE Education Program
• Publish TCR List and Engineering Aids • Initiate and Implement Depot Support Program (TMDE)			• Implement an ATE Program	• Implement Educational Program
Preferred Items List (PIL)	Funding and Budgeting	Calibration and Maintenance	Automatic Test Equipment (ATE)	Education and Training Program
• Establish Interim DESCOM PIL • Establish PIL Selection Criteria • Develop DESCOM PIL	• Establish TMDE Assets Funding Policy • Develop TMDE Funding Plan • Initiate Budget Action for New TMDE	• Assess Current TMDE Support System • Develop TMDE Cost Collection Subsystem • Determine TMDE Repair Criteria • Collect Cost of Current TMDE Support System	• Establish ATE Objectives and Requirements • Monitor Current Depot ATE Developments and Studies • Develop ATE Program	• Develop TMDE Educational Program • Present Education Program to DESCOM Headquarters
• Determine Depot Support Program (TMDE) Requirements • Develop TMDE Engineering Aids Documentation • Develop TCR List • Continually Review and Update DESCOM PIL • Implement Depot Support Program (TMDE)	• Obtain Funds to Acquire New TMDE	• Assess Calibration and Repair Support from Metrology Command • Evaluate Cost Savings by Modifying TMDE Support System • Modify TMDE Support System	• Implement ATE Program	• Present Education Program to DARCOM and Others • Present Education Program to Depots • Identify Personnel Training Requirements • Initiate Training Program
ee Appendix E, Preferred tems List (PIL), page E-5	See Appendix E, Funding and Budgeting, page E-6	See Appendix E, Calibration and Maintenance, page E-6	See Appendix E, Automatic Test Equipment (ATE), page E-7	See Appendix E, Education and Training Program, page E-7

OF DESCOM TMDE MANAGEMENT PROGRAM PLAN (DTMPP)

Table 3-2. AREAS OF CONSIDERATION CORRELATED WITH DTMPP ACTIVITIES

Areas of Consideration	DTMPP Activities
TMDE Accountability	• Define Reportable TMDE • Develop Assets Accountability Subsystem • Conduct Inventory of Current TMDE Assets • Change TDA to Reflect DESCOM PIL
Acquisition Data	• Develop TMDE Acquisition Policy and Procedures • Develop TMDE Funding Plan • Develop DESCOM PIL • Implement TMDE Replacement Program
TMDE Repair and Calibration	• Assess Current TMDE Support System • Develop TMDE Cost Collection Subsystem • Implement Depot Systems Support (TMDE) Program • Modify TMDE Support System
New Projected TMDE Procurement	• Interface with Program Managers of New Systems • Develop Forecast and Schedule for Replacement TMDE • Initiate Budget Action for New TMDE • Review Depot Mission, Goals, and Objectives
Depot Five-Year Modernization Programs	• Develop ATE Program • Initiate Training Program
Depot Source Document Procedure	Same as for Acquisition Data
Duplication of Functions when Securing Authorization for Procurement	Same as for Acquisition Data
Internal Delay and Duplication of Capital Equipment Procurement	Same as for Acquisition Data
Review $1,000 Cost Limitation the Depot Must Not Exceed Without DESCOM Approval on Procurement Actions	Same as for Acquisition Data

local situations make it mandatory that certain additional instructions be issued. To meet these needs, an Army-wide controlled supplement system is prescribed by AR 310-1.

- AR 750-43 permits local limited supplementation.
- DARCOM Supplement 1 to AR 750-43 directs the issuance of further supplements by the subordinate commander.
- The DARCOM TMDE Five-Year Program Plan directs that DARCOM subordinate commands prepare and maintain command supplements to AR 750-43.

On the basis of the above publications, it was concluded that the draft DESCOM TMDE document should be written as a supplement to AR 750-43 and DARCOM Supplement 1 to AR 750-43.

The format of the Draft DESCOM TMDE Supplement was prepared in accordance with the applicable sections of AR 310-3 and AR 310-2 and in consonance with AR 750-43 and DARCOM Supplement 1 to AR 750-43.

The contents of the DESCOM TMDE Supplement were based on an analysis of AR 750-43, DARCOM Supplement 1 to AR 750-43, and in compliance with contract requirements. The objectives of this analysis were to (1) determine which portions of the AR and DARCOM Supplement should be supplemented by DESCOM and (2) avoid duplicating applicable requirements of these documents. Review of the contract requirements indicated that the Draft DESCOM TMDE Regulation would include, as a minimum, sections related to scope, objectives, policy, and responsibilities. In addition, the contract stated that unique DESCOM TMDE activities, programs, or procedures would be included as appendixes. Once this analysis was accomplished, the DTMPP was reviewed, and pertinent portions were extracted and used in the appropriate sections of the Draft DESCOM TMDE Supplement. The draft supplement was then developed, supplementing the following sections of the DA and DARCOM TMDE regulations: Purpose, Scope, Objectives, Policy, Explanation of Terms, Responsibilities, and Procedures. The draft DESCOM TMDE Supplement also includes Chapter Five, "DESCOM TMDE Management Program Plan", and the appendixes, "Acquisition of TMDE" and "PIL Selection Criteria". The complete DESCOM TMDE Supplement is included as Appendix B.

CHAPTER FOUR

CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

On the basis of the review of DESCOM and depot documentation, interviews at HQ DESCOM, and interviews with key individuals at four designated depots, ARINC Research submits the following conclusions:

- DESCOM does not have a command-wide, standardized, or established TMDE program in accordance with AR 750-43.
- DESCOM does not have a TMDE regulation (supplement) as required by DA and DARCOM; rather, TMDE is managed as a part of other programs, such as DMPE.
- DESCOM has limited visibility of its TMDE assets because of asset-accounting procedures currently in use, e.g., items costing less than $1000 are not included in the CEDRS.
- Because of the absence of a command-wide DESCOM TMDE program, depot TMDE problems cannot be quickly resolved at the depot level or surfaced for resolution at the DESCOM level or higher.
- Compliance with DA and DARCOM TMDE regulations varies from depot to depot because each depot interprets the regulations differently and because the significance of TMDE as a production tool varies between depots.
- None of the depots visited have a comprehensive TMDE management program that compares favorably with either the requirements of the DA or DARCOM TMDE programs.
- The depot source document procedure responds too slowly to the needs of the depots in acquiring equipments in support of production. While the DTMPP and DESCOM Supplement 1 to AR 750-43 will focus management attention on TMDE, thereby providing some relief in the acquisition of TMDE, they may not alter or significantly affect the existing source documentation procedure.
- The $1000 cost limitation for the equipment acquisition required to support the depot mission, which cannot be exceeded without DESCOM approval, restricts the ability of depot management personnel to meet production requirements in a timely and cost-effective manner.

- A reduction in the proliferation of TMDE through the standardization of makes and/or models could potentially improve the TMDE support system, reduce associated logistic support costs, decrease calibration and repair cycle turnaround times, and thus reduce nonavailability of TMDE assets. Further, standardization that utilizes state-of-the-art TMDE will provide additional test and measurement capabilities and flexibility, thereby contributing significantly to production goals.
- The DTMPP (as described in Appendix A), after it has reached maturity, can be sustained within existing DESCOM personnel constraints, provided that supplemental funding is available for special projects. However, in order to implement the DTMPP, an effort three to five times the sustaining effort would be required.

4.2 RECOMMENDATIONS

On the basis of the results of this study, ARINC Research recommends the following:

- Implement a DESCOM TMDE Management Program Plan (Appendix A contains the DESCOM TMDE Management Program Plan)
- Issue a DESCOM Supplement to the DA and DARCOM Regulations on TMDE (Appendix B contains DESCOM Supplement 1 to AR 750-43)

Implementation of the above two recommendations will accomplish the following:

- Ensure compliance and compatibility of DESCOM with DA and DARCOM TMDE programs
- Establish a command-wide TMDE program
- Provide TMDE assets visibility
- Focus management attention on TMDE and provide methods for resolving TMDE-related problems
- Reduce TMDE proliferation

The following two recommendations evolved as a result of this study and also affect non-TMDE equipments:

- The source document procedure process should be reviewed, analyzed, and adjusted so that it can become more responsive to the needs of the organizations it is intended to serve.
- The $1000 cost-limitation figure should be reviewed and increased to an amount that incorporates the effects of inflation.

APPENDIX A

DRAFT DESCOM TMDE MANAGEMENT PROGRAM PLAN

This appendix contains the draft of the DESCOM TMDE Management Program Plan.

DRAFT

DESCOM TMDE MANAGEMENT PROGRAM PLAN

June 1978

Prepared for

U.S. Army Depot System Command
Chambersburg, Pennsylvania

under Contract DAEA18-72-A-0005

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FOREWORD

The DESCOM TMDE Management Program Plan is designed to provide direction to DESCOM TMDE managers in the establishment and execution of a comprehensive DESCOM TMDE Program.

This document sets forth the purpose, objectives, and scope of the plan. It describes the organization, functions, and responsibilities of the DESCOM TMDE Program. It also provides an overview of the entire program, describes the management and technical approaches to be utilized, and describes each functional area of the program in terms of the activities and relative time periods for their accomplishment.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

The U.S. Army Depot System Command (DESCOM) was activated on 1 September 1976 as a major subordinate command of the U.S. Army Materiel Development and Readiness Command (DARCOM). DESCOM is responsible for the command and control of DARCOM's depots and depot activities that provide support for U.S. Army materiel. The items used by the depots that most significantly affect both mission accomplishment and cost-effectiveness of the depot support system are Test, Management, and Diagnostic Equipment (TMDE).

To support the vast array of the U.S. Army materiel, an extensive amount of TMDE has been required. The availability and cost for maintaining the Army's TMDE inventory has created significant problem areas throughout the Army. To reduce TMDE proliferation and maintenance and support costs, and to keep pace with technological trends, the Department of the Army (DA) established a TMDE program as defined in U.S. Army Regulation (AR) 750-43. This AR established the policies and objectives for an Army-wide TMDE program, which was further supplemented by DARCOM. DARCOM has also directed its major subordinate commands to further supplement the AR to develop a definitized TMDE program that is applicable to their respective missions. Although individual TMDE programs exist at the depots, no comprehensive or standard program has been developed for TMDE management by DESCOM.

The TMDE Management Program Plan is DESCOM's planning document for the establishment of a TMDE program.

1.2 PURPOSE OF PROGRAM PLAN

The TMDE Management Program Plan establishes the objectives and responsible organization for life-cycle management of DESCOM TMDE.

1.3 OBJECTIVES OF PROGRAM PLAN

The overall objective of this document is to implement a DESCOM TMDE Management Program Plan (DTMPP) in accordance with AR 750-43 and DARCOM

Supplement 1 to AR 750-43. Specific objectives of the DTMPP are to:

- Enhance depot repair and overhaul capability
- Increase depot productivity
- Standardize DESCOM TMDE

For the accomplishment of the overall program, the plan has been divided into short-range and long-range objectives. The short-range objectives are those which can be accomplished in approximately one year. The long-range objectives are those objectives that require more than one year for attainment. These objectives are discussed in the following sections.

1.4 SHORT-RANGE OBJECTIVES

The following short-range objectives must be accomplished for the initiation, organization, and management of the DESCOM TMDE Program.

1.4.1 Issue DESCOM TMDE Management Program Plan (DTMPP)

The DESCOM TMDE Management Program Plan is designed to provide direction to DESCOM TMDE Managers in the establishment and execution of a comprehensive DESCOM TMDE Program. The completion and approval will initiate the functions and activities of the DTMPP.

1.4.2 Issue DESCOM TMDE Regulation

The management of TMDE is governed by U.S. Army Regulation (AR) 750-43, which provides the scope, objectives, and policies of the Department of the Army's overall TMDE program. In addition, this AR has been supplemented by DARCOM for the inclusion of their policies and responsibilities as related to the life-cycle management of TMDE. The completed DESCOM TMDE Regulation will contain the objectives, policy, responsibilities, and procedures for a DESCOM TMDE Program; when issued, it will be the governing document for the DTMPP.

1.4.3 Identify DESCOM TMDE Management Organization

To implement the DTMPP, a management organization must be identified to coordinate program functions, assignments, and responsibilities, in addition to ensuring maximum efficiency and cooperation among the DESCOM TMDE Program activities and other organizations involved in the overall DA TMDE Program.

1.4.4 Determine TMDE Performance Assessment Requirements

The large number of diverse activities involved in conducting a TMDE program requires a system for assessing the status of those activities. This system must be available for use by DESCOM management to continuously

assess the effectiveness of the program. This objective will determine the types of activities that should be monitored to provide a complete and accurate assessment of the TMDE program. Candidates for this assessment program include the following supporting subsystems: summary asset reports, accountability reports, and TMDE cost-collection data reports.

1.4.5 Establish TMDE Accountability Procedures

To manage the TMDE assets within DESCOM, a TMDE accountability subsystem must be developed. The scope of the asset accountability subsystem will provide management with across-the-board visibility of all TMDE by quantity, class, category, type, and location.

1.4.6 Develop TMDE Acquisition Policy and Procedures

A DESCOM TMDE acquisition policy must be established early in the program that would be the governing factor in the acquisition of all DESCOM TMDE. Once this policy is established, it will provide standard procedures for acquisition of new DESCOM TMDE.

1.4.7 Implement DESCOM TMDE Preferred Items List (PIL) Concept

The DESCOM concept will be to develop a Preferred Items List (PIL) of TMDE on the basis of pre-established selection criteria and to require the procurement of TMDE items only from that list.

1.4.8 Develop DESCOM TMDE Assets Funding Policy and Plan

To implement and maintain an effective TMDE program, it is important that funding and budgeting be included as prime elements to support the TMDE Management Program. The funding policy must include directions for preparing and updating a financial plan, developing funding schedules, providing financial estimates, confirming funds availability, and allocating funds. Budget actions for new TMDE must be initiated in a timely manner so that funds will be available for new TMDE in the years required.

1.4.9 Improve Cost-Effectiveness of TMDE Support

The cost-effectiveness of TMDE support is accomplished by establishing calibration and maintenance policies that minimize the recurring support costs and by continuously assessing and adjusting these policies as required. The planning process must identify and schedule optimal calibration intervals, institute improved maintenance procedures, and continuously assess the operational status and material condition of TMDE.

1.4.10 Establish an Automatic Test Equipment (ATE) Program

This objective is especially important to DESCOM because of the changing concepts of DA maintenance. It requires an in-depth investigation into the future role of depots in the utilization and support of automatic test equipment and the depth to which DESCOM should be involved in the management, operation, and application of ATE systems.

1.4.11 Develop TMDE Education Program

DESCOM management and operative personnel must be informed of all aspects of the policies, objectives, procedures, and requirements of the DTMPP in order for it to become part of the overall management philosophy of DESCOM. The TMDE Education Program will serve this purpose.

1.4.12 Develop DESCOM TMDE Five-Year Management Program Plan

A DESCOM Five-Year Management Program Plan will be developed to coordinate and report the accomplishments of the DTMPP to DARCOM.

1.5 LONG-RANGE OBJECTIVES

The long-range objectives are intended to fully develop the DESCOM TMDE Management Program Plan once the short-range objectives have been achieved. Some of the objectives are the implementation of those initially established in the short-range period, while others are an expansion of previously developed objectives. Further, new objectives have been introduced to complete the DTMPP. The following sections present the long-range objectives of the DESCOM TMDE Management Program Plan.

1.5.1 Develop and Implement TMDE Performance Assessment System

Once the subsystems constituting the overall performance assessment system have been determined (see Section 1.4.4), they must be developed and implemented. After implementation, the subsystems must be evaluated as to their adequacy in providing the desired information for monitoring and controlling the DESCOM TMDE Program.

1.5.2 Implement TMDE Replacement Program

This long-range objective is the result of the accomplishment of the short-range objectives listed in Sections 1.4.3 through 1.4.8. This TMDE replacement program will ensure a cyclic replacement of TMDE, enhancing the current TMDE with effective and latest state-of-the-art equipment.

1.5.3 Publish TMDE Cross-Reference (TCR) List and Engineering Aids

These two documents are used in conjunction with the DESCOM PIL for the selection of DESCOM TMDE. The TCR is intended as a guide that correlates non-PIL TMDE to PIL TMDE. The engineering aids are designed to assist personnel in selecting the minimum variety of TMDE from the DESCOM PIL to meet DESCOM test and measurement requirements.

1.5.4 Implement an Automatic Test Equipment (ATE) Program

The objective of this task is to implement the ATE program (Section 1.4.10) established and developed in the short-range period.

1.5.5 Implement Educational Program

The primary objective is the implementation of the Educational Program developed in the short-range period, which presents educational material to DESCOM Headquarters, DARCOM and other interested organizations, and to the TMDE personnel at each of the depots. A secondary objective is the development, establishment, and execution of TMDE training programs.

1.5.6 Implement DESCOM TMDE Five-Year Management Program Plan

This objective is to implement the DESCOM TMDE Five-Year Management Program Plan (Section 1.4.12) developed in the short-range period.

1.5.7 Initiate and Implement Depot Support Program (TMDE)

This program should be initiated and implemented by DESCOM to ensure that depots are maintained at their maximum capability for meeting operational commitments and to assist these depots in eliminating work stoppages.

1.6 PROGRAM SCOPE

The DESCOM Management Program Plan applies to HQ DESCOM and all depots and depot activities involved in the use of TMDE to accomplish their assigned support missions.

1.7 PROGRAM PLAN CONTENT

The DESCOM TMDE Management Program Plan consists of three chapters and three appendixes. Chapter One has presented the purpose, objectives (both short range and long range), and the scope of the plan. Chapter Two describes the organization, functions, and responsibilities of the DESCOM TMDE Program. Chapter Three provides an overview of the entire program, describes the management and technical approaches to be utilized, and describes each functional area of the program in terms of the activities and relative time periods for their accomplishment.

Appendix A is a bibliography of source material, Appendix B lists definitions of terms used throughout this plan, and Appendix C lists the recommended asset reports and provides a description of their data element composition.

CHAPTER TWO

ORGANIZATION, FUNCTIONS, AND RESPONSIBILITIES OF THE DESCOM TMDE MANAGEMENT PROGRAM PLAN

2.1 INTRODUCTION

This chapter describes the organizational structure, functions, and responsibilities of the DESCOM TMDE Management Program Plan (DTMPP).

2.2 PROGRAM ELEMENTS

The overall management and administration of the DESCOM TMDE Management Program Plan are described in Sections 2.2.1 and 2.2.2.

2.2.1 DA and DARCOM TMDE Policy

Table 2-1 describes the responsibilities of each command level in the TMDE program.

Table 2-1. TMDE PROGRAM SUPPORT

Command	Responsibilities
Department of the Army (DA)	Prescribes policy, establishes objectives, and assigns priorities and responsibilities for the life-cycle management of TMDE within the Army
DARCOM	Supplements DA TMDE regulation to provide guidance and direction to DARCOM activities in support of the DA TMDE program
DESCOM	Supplements DA and DARCOM regulations; establishes policy, objectives, and responsibilities of DESCOM headquarters and the depots in support of DA and DARCOM TMDE programs
Depot/Depot Activity	Establishes internal policy, objectives, and responsibilities in support of the overall DESCOM TMDE program

2.2.2 Command and TMDE Management Hierarchy

The command and TMDE management hierarchy is shown in Figure 2-1. The left side of the figure depicts command hierarchy for policy and decision-making. In parallel with the command hierarchy is the TMDE management hierarchy, which is dedicated to the management of the DA TMDE program. The relationship between command and TMDE management is indicated by the arrows joining the blocks.

2.2.3 DESCOM TMDE Management Program (DTMP) Organization

DESCOM will establish a DTMP organization under the Director of Depot Operations, consisting of a DESCOM TMDE Project Management Office (DTPMO), a DESCOM TMDE Project Officer (DTPO), and a DESCOM TMDE Management Group (DTMG).

The purpose of the DTMP organization is to continuously review, monitor, and manage the DESCOM TMDE in accordance with the guidance and direction received from DA, DARCOM, and DESCOM.

The following subsections present the responsibilities of the DTMP organization elements.

2.2.3.1 Responsibilities of the Director of Depot Operations

The Director of Depot Operations HQ DESCOM is responsible for the following activities:

- Serving as the central DESCOM action office to develop and coordinate TMDE policy, giving final approval on TMDE matters, and implementing the DTMPP
- Establishing and maintaining a DESCOM TMDE Project Management Office (DTPMO)
- Designating a DESCOM TMDE Project Officer (DTPO)
- Establishing and maintaining a DESCOM TMDE Management Group (DTMG)
- Assigning, monitoring, and evaluating TMDE tasks, including studies and surveys as required
- Maintaining a computer data base of DESCOM reportable TMDE
- Planning, programming, and budgeting for replacement of TMDE in coordination with the DESCOM Comptroller and DARCOM Materiel Readiness Commands
- Publishing authorized DESCOM PIL
- Approving depot support program (TMDE) requirements
- Approving TMDE support system cost savings goals
- Periodically reviewing calibration and maintenance support in coordination with the Quality Assurance Directorate to ensure it is consistent with depot mission requirements

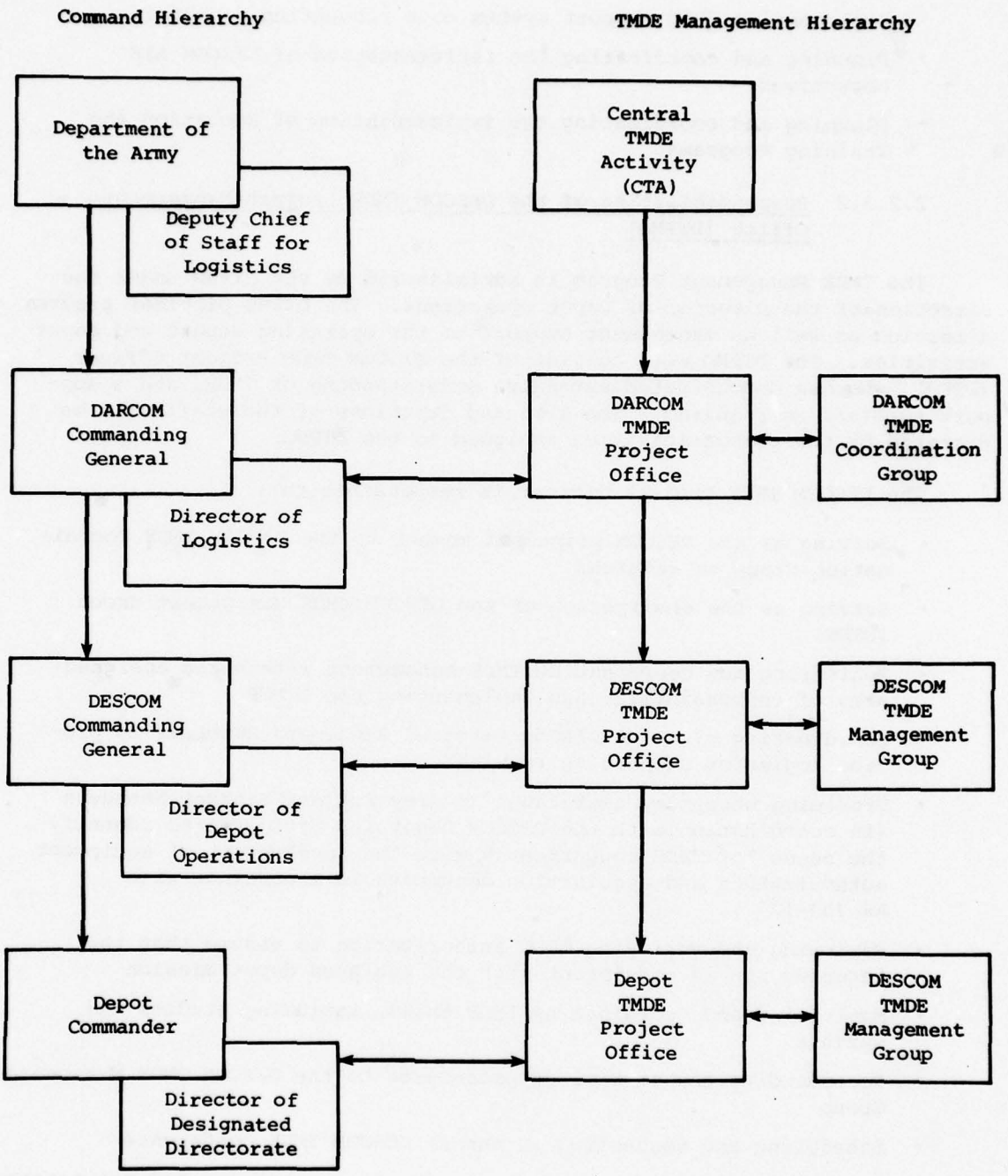

Figure 2-1. COMMAND AND TMDE MANAGEMENT HIERARCHY

- Implementing TMDE support system cost accounting procedures
- Planning and coordinating the implementation of DESCOM ATE objectives
- Planning and coordinating the implementation of Education and Training Programs

2.2.3.2 Responsibilities of the DESCOM TMDE Project Management Office (DTPMO)

The TMDE Management Program is administered by the DTPMO under the direction of the Director of Depot Operations. The DTPMO provides program direction as well as management support to the operating depots and depot activities. The DTPMO will consist of the DESCOM TMDE Project Officer (DTPO), who has demonstrated extensive understanding of TMDE, and a supporting staff as required. The size and functions of the staff will be dictated by the responsibilities assigned to the DTPMO.

The DESCOM TMDE Project Officer is responsible for:

- Serving as the DESCOM principal member to the DARCOM TMDE Coordination Group as required
- Serving as the chairperson of the DESCOM TMDE Management Group (DTMG)
- Monitoring and coordinating TMDE management within the assigned area of responsibility and implementing the DTMPP
- Coordinating with the DARCOM Materiel Readiness Commands to provide logistics support as required
- Providing necessary assistance to Army Project/Product Managers (in coordination with the DESCOM/Depot ILS officers) to identify the needs for TMDE concurrently with the development of equipment authorization and acquisition documents in accordance with AR 700-127
- Reviewing and verifying TMDE authorization to ensure that the intended use is consistent with the assigned depot mission
- Monitoring and coordinating TMDE tasks, including studies and surveys
- Recommending new or revised procedures to the DESCOM TMDE Management Group
- Scheduling and conducting an annual DESCOM TMDE conference
- Assisting and advising the depots in the preparation and maintenance of TMDE inventory and asset visibility reporting
- Assisting the depots in identifying, reporting, and disposing of obsolete or excess TMDE
- Maintaining accurate records of nonsupportable TMDE and assisting as required in obtaining necessary support
- Updating DESCOM central TMDE data file

- Reviewing, approving, and forwarding DA Forms 4062-R and 4062-1-R in accordance with AR 750-43
- Publishing and distributing a DESCOM TMDE Cross-Reference (TCR) list and engineering aids
- Assisting the DESCOM TMDE Management Group in the selection of preferred TMDE to meet the needs of the depots
- Reviewing depot support program (TMDE) requirements
- Ensuring that TMDE requirements are budgeted and funded
- Monitoring depot cost savings activities
- Consolidating, analyzing, and distributing TMDE support system cost accounting data
- Assisting DPTPOs, as required, in obtaining TMDE calibration and maintenance services
- Maintaining liaison with the Army Metrology and Calibration Center
- Assigning DESCON MCN to each make/model of reportable DESCOM TMDE not having an assigned National Stock Number (NSN).

2.2.3.3 Responsibilities of the DESCOM TMDE Management Group (DTMG)

The purpose of the DTMG is to continually review and assess DESCOM policies and procedures for the acquisition and utilization of TMDE in support of Army materiel.

Group members will consist of a principal and alternate representative from each of the following staff sections:

- Directorate for Management Information Systems
- Directorate for Depot Operations
- Comptroller Directorate
- Quality Assurance Office

Group meetings will be held quarterly, with additional meetings scheduled as required. The chairman will provide a written report to the Director of Depot Operations; the report will be included in the DARCOM TMDE quarterly Activities Report.

The DESCOM TMDE Management Group is responsible for the following activities:

- Monitoring and coordinating the centralized management of the DESCOM TMDE Management Program and implementing the DTMPP

- Planning, reviewing, and recommending to the Director of Depot Operations the policy and procedures for the control of TMDE proliferation and the modernization and standardization of TMDE at the depots
- Reviewing the overall DA TMDE Program, coordinating the DESCOM Program with DA and DARCOM, and monitoring the implementation and effectiveness of the DA TMDE Program within DESCOM
- Assigning, monitoring, and evaluating TMDE tasks, including studies and surveys as required
- Providing overall assistance for the DESCOM TMDE Program by monitoring the program effectiveness at the depots
- Approving new or revised TMDE management procedures
- Determining TMDE performance assessment requirements
- Developing DESCOM TMDE Five-Year Management Program Plan format and compiling and submitting quarterly TMDE activity reports to DARCOM
- Planning, coordinating, and establishing a TMDE management assessment program
- Advising and assisting in determining TMDE characteristics, standardization, and logistics support capabilities, prior to including the TMDE in equipment authorization or acquisition documents
- Reviewing TMDE requirements and advising if TMDE recommended for acquisition can or cannot be satisfied by TMDE on the DESCOM PIL
- Identifying the commonality of TMDE types and designating the preferred item to be included in future authorization (i.e., TDA) and acquisition documents
- Establishing, monitoring, and controlling the procedures for the DESCOM PIL to ensure that the TMDE reflects the latest state of the art; in the selection of a new PIL item, ensuring that supportability documentation is available and initiating action for inclusion of the item in the DA PIL
- Reviewing and approving all recommendations for nonpreferred TMDE to be classified as a mission-essential item
- Approving new DESCOM PIL TMDE
- Reviewing and consolidating TCRs and engineering aids
- Developing budgeting criteria for TMDE
- Determining TMDE support system cost savings goals
- Developing criteria for cost accounting

2.2.4 Depot TMDE Management Program (DPTMP) Organization

Each of the depots will establish an organization under a directorate designated by the depot commander consisting of a Depot TMDE Program Management Office (DPTPMO), Depot TMDE Project Officer (DPTPO), and a Depot TMDE Management Group (DPTMG).

The purpose of the Depot TMDE Program Management Organization is to continually review, monitor, and manage the depot TMDE activities in accordance with the guidance and direction received from DESCOM headquarters.

The following subsections describe the responsibilities of the DPTMP organization elements.

2.2.4.1 Responsibilities of the Director of the Designated Directorate

The Depot Commander of each depot will appoint a Directorate responsible for the following activities:

- Serving as the central depot action office for the Depot TMDE Management Program and implementation of the DTMPP
- Developing a local TMDE regulation that consolidates and implements the policies and procedures required to manage TMDE
- Establishing and maintaining a Depot TMDE Project Management Office (DPTPMO)
- Designating a Depot TMDE Project Officer (DPTPO)
- Establishing and maintaining a Depot TMDE Management Group (DPTMG)
- Providing an on-call member to the DESCOM TMDE Management Group; this member will normally be the chairman of the Depot TMDE Management Group
- Assigning, monitoring, and evaluating *TMDE tasks, including studies* and surveys as required
- Implementing a TMDE management assessment program
- Approving TMDE authorizations and TDA changes
- Approving of the disposal of obsolete and excess TMDE
- Approving requests for acquisition of TMDE
- Approving and forwarding depot support program (TMDE) requirements in accordance with DESCOM policy
- Approving and forwarding depot requirements for TMDE replacement
- Approving and implementing procedures for meeting cost savings goals
- Coordinating, prior to acceptance of new or nonstandard TMDE, with the responsible TMDE support activity to ensure that the calibration, repair, and supply support capabilities are currently available
- *Approving repair of nonpreferred TMDE*
- Providing input to the ATE planning process as required
- Providing TMDE education and training requirements

2.2.4.2 Responsibilities of the Depot TMDE Project Management Office (DPTPMO)

The Depot TMDE Management Program is administered by the DPTPMO under the Director of the designated directorate. The DPTPMO provides direction and management of the Depot TMDE Management Program and consists of the Depot TMDE Project Officer (DPTPO) and a supporting staff. The size and functions of the staff will be dictated by the responsibilities assigned to the DPTPO.

The Depot TMDE Project Officer is responsible for:

- Serving as a member of the DESCOM TMDE Management Group
- Serving as chairman of the Depot TMDE Management Group
- Monitoring and coordinating TMDE management within his area of responsibility and implementing the DTMPP
- Reviewing TMDE authorizations and TDA changes approved by the DPTMG
- Monitoring and coordinating TMDE management within his area of responsibility and implementing the DTMPP
- Reviewing TMDE authorizations and TDA changes approved by the DPTMG
- Monitoring and coordinating TMDE tasks, including studies and surveys
- Coordinating new or revised procedures concerning the management of TMDE with the Depot TMDE Management Group
- Assisting DTPO in providing interface with Army Project/Product Managers on matters relating to TMDE
- Ensuring all depot reportable TMDE have been reported to the DTPO
- Identifying and reporting obsolete and excess TMDE
- Maintaining records of nonsupportable TMDE and reporting these items to the Depot TMDE Management Group
- Reviewing and approving DA Forms 4062-R and 4062-1-R
- Assisting the Depot TMDE Management Group in the selection of preferred TMDE to fulfill the depot needs
- Preparing semiannual updates to the DESCOM TMDE Cross-Reference (TCR) list and engineering aids
- Determining depot support program (TMDE) requirements
- Forecasting depot requirements for TMDE replacement
- Monitoring and reporting cost savings
- Coordinating (with the Calibration Coordinator) TMDE calibration, maintenance, and supply requirements with supporting maintenance and calibration facilities

- Recommending modifications to the TMDE support system

2.2.4.3 Depot TMDE Management Group (DPTMG)

The purpose of the DPTMG is to study, review, and resolve depot TMDE problems and to provide a focal point for these problems.

The Group should consist of 6 representatives from the following staff sections:

- Directorate for Maintenance
- Directorate for Management Information Systems
- Comptroller Directorate
- Directorate for Administration and Services
- Directorate for Quality Assurance
- Directorate for Supply

Group meetings will be scheduled and conducted quarterly. A report of these meetings will be forwarded to DESCOM headquarters.

The Depot TMDE Management Group is responsible for the following activities:

- Monitoring and coordinating the Depot TMDE Management Program and implementing the DTMPP
- Reviewing and approving all TMDE authorizations to ensure that the intended use is consistent with assigned depot missions; reviewing depot TDA to ensure only PIL TMDE are authorized
- Monitoring and coordinating TMDE tasks, including studies and surveys as required
- Monitoring TMDE program effectiveness at depot
- Compiling and submitting quarterly TMDE activities reports to DTMG for inclusion in DESCOM TMDE Five-Year Management Program Plan
- Recommending procedures for obtaining support for non-supportable TMDE
- Reviewing DA Forms 4062-R and 4062-1-R
- Reviewing TMDE requirements and advising if TMDE proposed for acquisition can or cannot be satisfied by TMDE identified on the DESCOM PIL
- Identifying commonality of TMDE types and designating the preferred item to be included in future equipment authorization and acquisition documents

- Approving and forwarding depot-recommended TMDE candidates for DESCOM PIL
- Determining and justifying, to the DESCOM TMDE Management Group, those nonpreferred TMDE that should be classified as mission-essential items
- Reviewing and approving DESCOM TMDE Cross-Reference (TCR) list submissions and updates
- Reviewing depot requirements for TMDE replacement
- Developing depot procedures for meeting cost savings goals
- Reviewing and approving modifications to the depot TMDE support system

CHAPTER THREE

OVERVIEW OF THE DESCOM TMDE MANAGEMENT PROGRAM PLAN

The DESCOM TMDE Management Program Plan (DTMPP) will be managed and executed within the framework of the organization discussed in Chapter Two. Planning, programming, and budgeting are defined by the applicable regulations listed in Appendix A, and the DTMPP will conform to these requirements.

The DTMPP is a dynamic plan, evolving during the next several years as depot missions change and new requirements arise for TMDE to support these missions. As the program develops, all activities dedicated to achieving the program objectives must continuously reassess their functions and responsibilities. Early recognition of the funding, personnel, and material requirements of these evolutionary developments is essential so that timely budgetary submissions can be made.

Table 3-1, DTMPP Activity Index, provides a means to rapidly locate the paragraph of a specific activity within this plan. The activities are listed in the order that they appear in Figure 3-1, which illustrates the plan's functions and their interrelated activities and program flow.

Figure 3-1 presents the plan activities designed to meet the short-range and long-range objectives of the DTMPP. It is composed of three distinct divisions:

- The functional areas, listed vertically, consist of eight composite plan functions.
- The time periods are shown horizontally and are numbered I through VI. Time periods I through IV are short-range activities, and time periods V and VI are long-range activities. All the activities shown in one of the time periods should be completed before the activities in the next time period are started.
- The third division consists of the individual activities that must be accomplished to meet the objectives of the DTMPP. The activities begin at the top left and flow both vertically and horizontally within the time period. All the activities within the vertical time period should be accomplished before the next horizontal or vertical activity is started. The left-to-right and top-to-bottom activity movement is essential for meeting the plan objectives.

Table 3-1. DTMPP ACTIVITY INDEX

Activity	Functional Area	Time Period	Paragraph
Issue TMDE Management Plan	Program Management	I	3.2.1
Issue TMDE Regulation	Program Management	I	3.2.1
Establish DTPMO	Program Management	I	3.2.1
Establish DPTPMO	Program Management	I	3.2.1
Establish DTMG	Program Management	I	3.2.1
Establish DPTMG	Program Management	I	3.2.1
Determine TMDE Performance Assessment Requirements	Program Management	II	3.2.2.1
Develop DESCOM TMDE Five-Year Management Program Plan	Program Management	II	3.2.2.1
Develop TMDE Reports Subsystem	Program Management	II	3.2.2.1
Interface with PMs of New Systems	Program Management	II	3.2.2.1
Define Reportable TMDE	Assets Accountability	II	3.2.2.2
Define TMDE Supportability Criteria	Assets Accountability	II	3.2.2.2
Develop Assets Accountability Subsystem	Assets Accountability	II	3.2.2.2
Develop TMDE Acquisition Policy and Procedures	Acquisition Process	II	3.2.2.3
Publish TMDE Acquisition Policy and Procedures	Acquisition Process	II	3.2.2.3
Establish Interim DESCOM PIL	Preferred Items List (PIL)	II	3.2.2.4
Establish PIL Selection Critiera	Preferred Items List (PIL)	II	3.2.2.4
Establish TMDE Assets Funding Policy	Funding and Budgeting	II	3.2.2.5
Review Depot Mission, Goals, and Objectives	Program Management	III	3.2.3.1
Inventory Current TMDE Assets	Assets Accountability	III	3.2.3.2
Analyze Inventory of Current TMDE Assets	Assets Accountability	III	3.2.3.2
Develop TMDE Funding Plan	Funding and Budgeting	III	3.2.3.3
Assess Current TMDE Support System	Calibration and Maintenance	III	3.2.3.4
Establish ATE Objectives and Requirements	Automatic Test Equipment (ATE)	III	3.2.3.5
Monitor Current Depot ATE Developments and Studies	Automatic Test Equipment (ATE)	III	3.2.3.5
Develop TMDE Educational Program	Education and Training Program	III	3.2.3.6
Evaluate Effectiveness of Established Subsystems	Program Management	IV	3.2.4.1
Reassess Depot TMDE Requirements	Assets Accountability	IV	3.2.4.2
Develop Forecast and Schedule for Replacement of TMDE	Acquisition Process	IV	3.2.4.3
Develop DESCOM PIL	Preferred Items List (PIL)	IV	3.2.4.4
Initiate Budget Action for New TMDE	Funding and Budgeting	IV	3.2.4.5
Develop TMDE Cost Collection Subsystem	Calibration and Maintenance	IV	3.2.4.6
Determine TMDE Repair Criteria	Calibration and Maintenance	IV	3.2.4.6
Collect Cost of Current TMDE Support System	Calibration and Maintenance	IV	3.2.4.6
Develop ATE Program	Automatic Test Equipment (ATE)	IV	3.2.4.7
Present Education Program to DESCOM Headquarters	Education and Training Program	IV	3.2.4.8
Develop TMDE Performance Assessment System	Program Management	V	3.2.5.1
Refine TMDE Acquisition Process	Acquisition Process	V	3.2.5.2
Determine Depot Support Program (TMDE) Requirements	Preferred Items List (PIL)	V	3.2.5.3
Develop TMDE Engineering Aids Document	Preferred Items List (PIL)	V	3.2.5.3
Assess Calibration and Repair Support from Metrology Command	Calibration and Maintenance	V	3.2.5.4
Implement ATE Program	Automatic Test Equipment (ATE)	V	3.2.5.5
Present Education Program to DARCOM and Others	Education and Training Program	V	3.2.5.6
Implement TMDE Performance Assessment System	Program Management	VI	3.2.6.1
Implement DESCOM Five-Year Management Program Plan	Program Management	VI	3.2.6.1
Submit Quarterly TMDE Activities Reports to DARCOM	Program Management	VI	3.2.6.1
Change TDA to Reflect DESCOM PIL	Assets Accountability	VI	3.2.6.2
Acquire New PIL TMDE Using Available Funds	Acquisition Process	VI	3.2.6.3
Implement TMDE Replacement Program	Acquisition Process	VI	3.2.6.3
Develop TCR List	Preferred Items List (PIL)	VI	3.2.6.4
Continually Review and Update DESCOM PIL	Preferred Items List (PIL)	VI	3.2.6.4
Implement Depot Support Program (TMDE)	Preferred Items List (PIL)	VI	3.2.6.4
Obtain Funds to Acquire New TMDE	Funding and Budgeting	VI	3.2.6.5
Evaluate Cost Savings by Modifying TMDE Support System	Calibration and Maintenance	VI	3.2.6.6
Modify TMDE Support System	Calibration and Maintenance	VI	3.2.6.6
Present Education Program to Depots	Education and Training Program	VI	3.2.6.7
Identify Personnel Training Requirements	Education and Training Program	VI	3.2.6.7
Initiate Training Program	Education and Training Program	VI	3.2.6.7

Functional Area	Time Peri		
	Short Range		
	I	II	III
Program Management	Issue TMDE Management Plan Issue TMDE Regulation Establish DTPMO Establish DPTPMO Establish DTMG Establish DPTMG	Determine TMDE Performance Assessment Requirements Develop TMDE Reports System Develop DESCOM TMDE 5-Year Management Program Plan Interface with PMs of New Systems	Review Depots Mission, Goals, Objectives
Assets Accountability		Define Reportable TMDE Develop Assets Accountability Subsystem Define TMDE Supportability Criteria	Conduct Inventor of Current TMDE Assets Analyze Inventor of Current TMDE Assets
Acquisition Process		Develop TMDE Acquisition Policy and Procedures Publish TMDE Acquisition Policy and Procedures	
Preferred Items List (PIL)		Establish Interim DESCOM PIL Establish PIL Selection Criteria	
Funding and Budgeting		Establish TMDE Assets Funding Policy	Develop TMDE Funding Pla
Calibration and Maintenance			Assess Current TMDE Support Syst
Automatic Test Equipment (ATE)			Establish ATE Objectives and Requirements Monitor Current Depot ATE Developments and St
Education and Training Programs			Develop TMDE Educational Progr

Figure 3-1. DESCOM TMDE MANAGEMEN

	Time Periods			
			Long Range	
	III	IV	V	VI
...MDE ...ystem	Review Depots Mission, Goals, Objectives	Evaluate Effectiveness of Established Subsystems	Develop TMDE Performance Assessment System	Implement TMDE Performance Assessment System
...ith PMs ...ystems				Implement DESCOM TMDE 5-Year Management Program Plan Submit Quarterly TMDE Activities Reports to DARCOM
...sets ...ility ...em	Conduct Inventory of Current TMDE Assets			
	Analyze Inventory of Current TMDE Assets	Reassess Depot TMDE Requirements		Change TDA to Reflect DESCOM PIL
...MDE ... Policy ...dures			Refine TMDE Acquisition Process	Acquire New PIL TMDE Using Available Funds
		Develop Forecast and Schedule for Replacement of TMDE		Implement TMDE Replacement Program
...h PIL ...Criteria		Develop DESCOM PIL	Determine Depot Support Program (TMDE) Requirements	Develop TCR List
			Develop TMDE Engineering Aids Document	Continually Review and Update DESCOM PIL Implement Depot Support Program (TMDE)
	Develop TMDE Funding Plan	Initiate Budget Action for New TMDE		Obtain Funds to Acquire New TMDE
	Assess Current TMDE Support System	Develop TMDE Cost Collection Subsystem Collect Cost of Current TMDE Support System	Assess Calibration and Repair Support from Metrology Command	Evaluate Cost Savings by Modifying TMDE Support System Modify TMDE Support System
		Determine TMDE Repair Criteria		
	Establish ATE Objectives and Requirements	Develop ATE Program	Implement ATE Program	
	Monitor Current Depot ATE Developments and Studies			
	Develop TMDE Educational Program	Present Education Program to DESCOM Headquarters	Present Education Program to DARCOM and Others	Present Education Program to Depots
				Identify Personnel Training Requirements Initiate Training Program

...M TMDE MANAGEMENT PLAN ACTIVITIES

3.1 DESCOM TMDE MANAGEMENT PROGRAM PLAN (DTMPP) FUNCTIONAL AREAS

Each DTMPP functional area supports the accomplishment of one or more of the short- and long-range objectives described in Chapter One. The specific objectives for each functional area are listed here following the description of that area. The eight functional areas, as shown in Figure 3-1, are described in the following subsections.

3.1.1 Program Management

This function relates to DESCOM's responsibility in the total management effort of the DTMPP and offers support in accomplishing the following objectives:

- Issue DESCOM TMDE Management Program Plan
- Issue DESCOM TMDE Regulation
- Identify DESCOM TMDE management organization
- Determine TMDE performance assessment requirements
- Develop and implement TMDE performance assessment system
- Develop and implement DESCOM Five-Year Management Program Plan
- Initiate and implement Depot Support Program (TMDE)

3.1.2 Assets Accountability

This function relates to the policy, responsibility, and procedures for total DESCOM TMDE asset visibility and accountability. It supports the accomplishment of the following objectives:

- Determine TMDE performance assessment requirements
- Establish TMDE accountability procedures
- Implement DESCOM PIL concept
- Implement TMDE replacement program
- Publish TMDE Cross-Reference (TCR) list and engineering aids
- Develop and implement TMDE performance assessment system
- Initiate and implement Depot Support Program (TMDE)

3.1.3 Acquisition Process

This function relates to the policy, responsibility, and procedures for control, workload requirements, and simplification of the acquisition process for TMDE, and it supports the following objectives:

- Develop TMDE acquisition policy and procedures
- Implement DESCOM PIL concept

- Develop DESCOM TMDE funding policy and plan
- Initiate TMDE replacement program

3.1.4 Preferred Items List (PIL)

This function relates to the establishment of a PIL that would reduce source document flow and acquisition delays and ultimately provide TMDE standardization throughout DESCOM. It supports the accomplishment of the following objectives:

- Implement DESCOM PIL concept
- Develop TMDE acquisition policy and procedures
- Publish TMDE Cross-Reference (TCR) list and engineering aids
- Implement TMDE replacement program

3.1.5 Funding and Budgeting

This function relates to the establishment of a policy and plan for TMDE funding and budgeting and offers support in accomplishing the following objectives:

- Develop DESCOM TMDE assets funding policy and plan
- Improve cost-effectiveness of TMDE support
- Implement TMDE replacement program

3.1.6 Calibration and Maintenance

This function relates to the identification of TMDE support-cost drivers, analysis of the total support program, and possible savings to be realized from modifying the support system. It assists in meeting the following objectives:

- Improve the cost-effectiveness of TMDE support
- Determine TMDE performance assessment requirements
- Develop DESCOM TMDE assets funding policy and plan
- Develop and implement TMDE performance assessment system

3.1.7 Automatic Test Equipment (ATE)

This function relates to depot technological growth, study requirements, and establishment of ATE objectives and goals; it supports achievement of the following objectives:

- Establish ATE Program
- Implement ATE Program

3.1.8 Education and Training Programs

This function relates to the initial TMDE program education requirement for all DESCOM personnel. In addition, training of personnel for new equipments must be addressed to keep pace with new equipment technological developments. The function supports the following objectives:

- Develop TMDE Education Program
- Implement TMDE Education Program

3.2 DESCOM TMDE MANAGEMENT PLAN ACTIVITIES BY TIME PERIODS

This section describes the activities in each functional area for the respective time period as presented in Figure 3-1. The achievement of these activities is required to meet the objectives of the DTMPP.

3.2.1 Time Period I

Time Period I encompasses the following program management activities:

- Issue TMDE Management Plan. On the basis of DA and DARCOM TMDE regulations and depot operating procedures, a DESCOM TMDE Management Program Plan (DTMPP) was drafted. The draft DTMPP will be finalized and issued as the guide for implementing the TMDE program in DESCOM.
- Issue TMDE Regulation. A DESCOM Regulation was drafted on the basis of policy, objectives, and procedures set forth in the DA and DARCOM TMDE Regulations and in the DTMPP. This regulation will be finalized and issued as the governing source for the DESCOM TMDE Program.
- Establish DTPMO. To manage the DTMPP at the DESCOM command level, a DESCOM TMDE Project Management Office will be established.
- Establish DPTPMO. To manage the DTMPP at the depot command level, a Depot TMDE Project Management Office will be established.
- Establish DTMG. To provide coordinated management support to the DTMPP at the DESCOM command level, the DESCOM TMDE Management Group will be established.
- Establish DPTMG. To provide coordinated management support to the DTMPP at the depot command level, the Depot TMDE Management Group will be established.

3.2.2 Time Period II

Time Period II covers the first five functional areas shown in Figure 3-1.

3.2.2.1 Program Management (II)

The following program management activities take place in Time Period II:

- Determine TMDE Performance Assessment Requirements. The purpose of this activity is to determine the methods to be used for assessing the functional areas of the DTMPP and their progression toward accomplishment of the DTMPP objectives. Inherent in the assessment is the development of the monitoring tools for all management levels. These tools will be structured to focus attention on key activities of the DTMPP and to highlight achievements or problem areas.
- Develop DESCOM TMDE Five-Year Management Program Plan. The purpose of this activity is to develop the methodology, reporting structure, and responsibilities for a DESCOM TMDE Five-Year Management Program Plan. This plan will provide a comprehensive status on key elements of the DTMPP, its various activities and their completion dates, resources required, and the progress toward completing each activity. It will be submitted annually to DARCOM for use in the DARCOM TMDE Five-Year Program Plan.
- Develop TMDE Reports System. To manage the DTMPP efficiently, a large volume of information must be continuously reviewed, processed, updated, exchanged, and distributed. Specific reporting requirements, formats, and procedures must be developed for each category of information. Because of the volume and type of information (data) that must be processed, the availability of automated data processing equipment (ADPE) will play a significant role in meeting the DTMPP objectives. Table 3-2 shows the required DTMPP reports, the frequency of input/output requirements, and whether the report is produced manually or by ADP. Each of the reports is discussed below [Note: A Reports Control Symbol (RCS) is required for each report]:
  - DESCOM TMDE Assets. Asset visibility is fundamental to the success of the DTMPP and is required for items classified as TMDE in accordance with SB700-20, DA PAM 700-20 and DA PAM 700-21 and/or require calibration, regardless of cost. TMDE assets will be entered initially into a data base, from which a series of management reports will be derived. A list of these management reports and their respective data elements are contained in Appendix C. The central data file will be continually updated as new TMDE is purchased, when existing TMDE is transferred, or when an item is sent to property disposal.
  - Calibration and Maintenance Cost. This report is derived from each separate DESCOM TMDE support activity and is provided quarterly to DESCOM via an automatic data processing tape. For each TMDE calibrated or repaired during the reporting period, the following data will be included:
    - TMDE Identification Data (NSN/MCN, SN, etc.)
    - Man-hours required to process, repair and/or calibrate

Table 3-2. REQUIRED DTMPP REPORTS

Title	Frequency of Inputs	Frequency of Outputs	Report Mode	
			ADP	Manual
DESCOM TMDE Assets	Initially or as required	To be determined	X	
Calibration and Maintenance Cost	Quarterly	Quarterly	X	
DESCOM TMDE Five-Year Management Program Plan	Quarterly	Annually		X
TMDE Support Cost	Semiannually	As required		X

- Material expended
- Number of days Awaiting Shop and Deadlined

DESCOM will consolidate the data from all the depots by NSN/MCN, etc. The data will provide factual information for use in determining TMDE support cost, trends, and savings realized.

- DESCOM TMDE Five-Year Management Program Plan. The DESCOM TMDE Five-Year Management Program Plan is prepared to implement DA and DARCOM TMDE program guidance and to report accomplishments. It is a coordinated documentation of DESCOM TMDE objectives and is prepared manually and submitted annually to DARCOM. In addition, quarterly TMDE activity progress reports are provided to DARCOM to indicate the current status of assigned objectives.
- TMDE Support Cost. The TMDE Support Cost Report is prepared manually and provided semiannually to DESCOM. This report documents the various TMDE support cost-reduction programs in effect at each depot and reports their progress. It is prepared in response to the DESCOM requirement (see activity "Establish TMDE Assets Funding Policy", Time Period II) for each depot to generate OMA cost savings from funds allocated for TMDE support. These funds are used to support activities of the DTMPP.

- Interface with Product/Program Managers (PMs) of New Systems. Initially this activity consists of compiling a list of PMs who currently receive depot support from DESCOM or plan to receive support in the future. The objective is to ensure that a representative of the depot selected to support the PM's product line

is in contact with the PM and that both are aware of the DTMPP objectives. Further, the DESCOM (or depot-selected) representatives must become involved with the logistic support planning of each new system. Thus the duties of interfacing with a PM include:

- Briefing the PM and his staff on the DTMPP
- Participating in all phases of the logistic support planning process, with specific emphasis on the DTMPP objectives
- Attending all In Process Reviews (IPRs)

3.2.2.2 Asset Accountability (II)

The following asset accountability activities take place in Time Period II:

- Define Reportable TMDE. See Appendix B (Reportable TMDE).
- Define TMDE Supportability Criteria. See Appendix B (Supportable TMDE), as well as the activity "Establish PIL Selection Criteria", Time Period II.
- Develop Assets Accountability Subsystem. All REPORTABLE DESCOM TMDE will be included in the Assets Accountability Subsystem and identified, as a minimum, by location, National Stock Number (NSN)/ Management Control Number (MCN), and Serial Number (SN). Location refers to the Unit Identification Code or work center. This includes TMDE costing less than $1000. NSNs are obtained from the Army Master Data File. For TMDE without an NSN, an MCN is assigned by DESCOM. MCNs will be assigned by DESCOM during the initial inventory to obtain TMDE asset visibility. Thereafter, MCNs are assigned as required to account for new TMDE. It can be expected that a large number of MCNs will transition to NSNs. If there is no SN on the equipment, one will be assigned locally. Care will be taken to ensure like items are not assigned the same SN. Assigned SNs will be affixed to the equipment.

3.2.2.3 Acquisition Process (II)

The following acquisition process activities take place in Time Period II:

- Develop TMDE Acquisition Policy and Procedures. The purpose of this activity is to develop a DESCOM acquisition policy and establish the procedures by which new TMDE can be acquired expeditiously. The main thrust of the policy will be that it is mandatory to procure any new TMDE from the DESCOM Preferred Items List (PIL). It also establishes that requests for the purchase of new types of TMDE will be approved only after verification of the following:
  - The functional test requirements cannot be performed by TMDE currently on the DESCOM PIL.

- Logistics support currently exists and is identified.
- Procurement action includes acceptable calibration procedures, operator and maintenance manuals, and repair parts lists.
- Acquisition of new TMDE with local funds will be initiated only after approval has been authorized in accordance with the DESCOM Acquisition Procedures as set forth in this Program Plan.

The acquisition procedure is constrained by the policy to procure only TMDE that is on the DESCOM PIL. Thus to obtain a new TMDE that is not on the DESCOM PIL, it is necessary to establish the new TMDE as a DESCOM PIL item before it can be acquired and added to the inventory. Figure 3-2 shows the procedural flow required for the acquisition of TMDE. The steps of the procedure are as follows:

- Identify TMDE requirements (accomplished by the Depot TMDE Management Group).
- Research DESCOM PIL to determine if the new TMDE is a DESCOM preferred item.
- If it is a DESCOM PIL item, obtain DESCOM approval and funds, and acquire the item.
- If it is not a DESCOM PIL item, follow these procedures*:
  - Research DA PIL to determine if it is listed. If it is not listed in the DA PIL, research the DA TMDE Register. If it is not listed on this register, research the commercial market for an item that will meet the requirements using the PIL selection criteria covered in Appendix E. Select an off-the-shelf item of test equipment, complete DA Form 4062-R, and determine the supportability of the selected item. If the item cannot be supported, reject it.
  - If the item is listed in the DA PIL or in the DA TMDE Register, determine its supportability. If it cannot be supported, reject the item.
  - If the selected item can be supported, complete DA Form 4062-1-R and submit the item with the approval of the Depot Commander to the DESCOM TMDE Management Group as a PIL candidate.
  - DESCOM Management Group will review the candidate PIL TMDE and approve or disapprove it as a PIL item. If it is disapproved, DESCOM will recommend another approach to

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*Consideration should be given to leasing as opposed to buying TMDE to meet specific short-term requirements. If a decision is made to lease an instrument to meet the test/measurement requirements, the acquisition process is the same as for a DESCOM PIL TMDE. TMDE for short-term requirements might also be borrowed from the NICP.

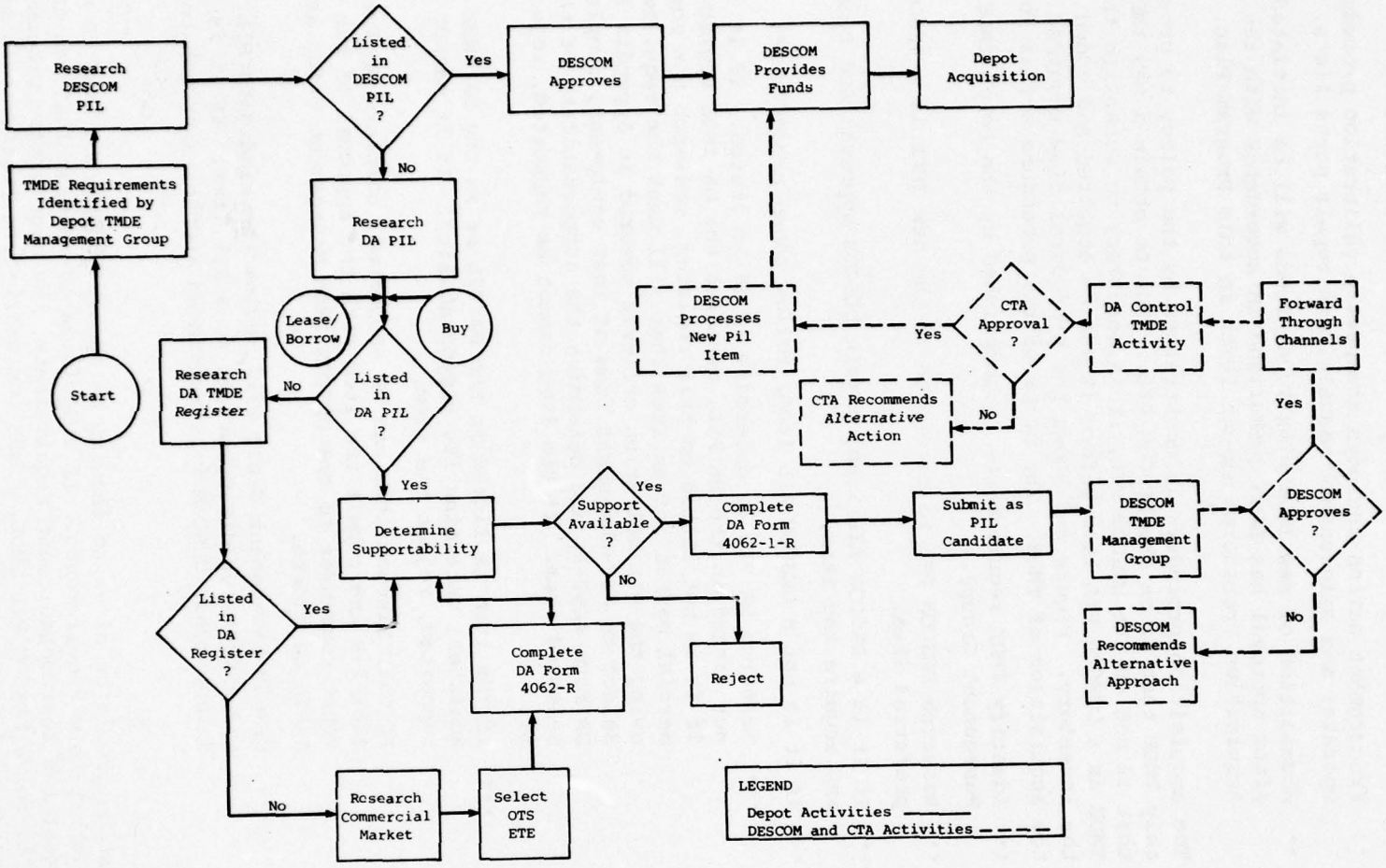

Figure 3-2. PROCESSING REQUEST FOR ACQUISITION OF TMDE

satisfying the requirement. If DESCOM approves the item, the approval will be forwarded through channels to the DA Central TMDE Activity (CTA). The CTA can approve the item for acquisition or provide a recommendation for a more acceptable item.

- ••• The approved TMDE will then be processed by DESCOM and added to the DESCOM PIL. Type classification or exemption will be initiated. The approved document will be returned to the depot for acquisition of the new DESCOM PIL TMDE.
- ••• The final step is to obtain funds from DESCOM and acquire the item.
- ••• Upon receipt of the item, request LIN and NSN in accordance with AR 310-49.

- Publish TMDE Acquisition Policy and Procedures. The purpose of this activity is to publish and distribute to all of the depots the DESCOM TMDE Acquisition policy and procedures.

3.2.2.4 Preferred Items List (PIL) (II)

The following activities for the Preferred Items List (PIL) take place in Time Period II:

- Establish Interim DESCOM PIL. The DESCOM PIL is the key to the DESCOM TMDE Management Program Plan (DTMPP); however, the development and subsequent refinement of this important management tool is a time-consuming process. Available information indicates that it will take between 12 and 18 months to develop a DESCOM PIL and approximately 2 to 4 years thereafter for the PIL to mature and stabilize. To reduce the time required to develop and mature the DESCOM PIL, an Interim DESCOM PIL will be formulated immediately upon activation of the DTMPP.

  The interim PIL will be developed from the existing DA and USACC PILs. The PILs of other DARCOM commands will also be screened to identify possible candidates for addition to the interim DESCOM PIL. These inputs will be consolidated and formulated into an interim DESCOM PIL that must be reviewed and approved by the DESCOM TMDE Management Group.

  The DESCOM PIL will be distributed within DESCOM down to the user level. It will also be distributed to DARCOM and other DA activities as deemed appropriate.

  Upon publication and distribution of the PIL, the only valid authorization for an item of TMDE is through its documented test and measurement requirements in support of the DESCOM mission. The fact that TMDE is listed in technical manuals, maintenance support plans, etc., is no longer an acceptable reason for retention or acquisition of specific TMDE.

The purpose of the DESCOM PIL is to promote standardization and prevent proliferation. The PIL controls acquisition of only those makes and models of TMDE that have a TMDE category code of PA, PB, PC, PD, PP, XX, and UK. (See Appendix B for explanation of codes.) Items coded AH are exempt in accordance with Chapter 3 of AR 750-43, and items coded NC or SP are controlled by DoD elements outside the scope of the DTMPP. However, they are accounted for within the DTMPP because of their respective calibration and repair requirements. Further, the PIL philosophy is intended to direct the selection of TMDE that are oriented toward the total DESCOM mission and not toward individual depot or project requirements.

- Establish PIL Selection Criteria. To maintain the DESCOM PIL at some manageable number of TMDE and to ensure that PIL items are in fact the best available to support the DESCOM mission, a "PIL" Selection Criterion" is necessary. The selection criterion establishes the minimum acceptable characteristics that the PIL candidate TMDE must have to be selected for the DESCOM PIL. These characteristics are discussed below:

  - Mission-Essential. The PIL candidate must be able to perform a TMDE mission that is required by depots in support of U.S. Army materiel and that cannot be performed by an existing PIL item. It must also have potential application for existing or anticipated new systems that will be supported by the depot. Replacement of an existing PIL item is another consideration.

  - Obtainable. The candidate must be obtainable on the commercial market or readily available in the military system. "Readily available" is defined as deliverable within 90 days after the requirement has been validated and the item requisitioned. For the commercial market, the date the item was first marketed and the date the manufacturer plans to phase out or change the model number are important. As a general rule, if the item is going to be phased out or a model change is anticipated the item should not be added to the PIL.

  - Supportable. The item must be supportable within the existing depot repair and calibration support systems; that is, the supporting technical document must include:

    - Maintenance procedures (theory, troubleshooting, alignment procedures, schematics)
    - Calibration procedures
    - Repair Parts List

    The maintenance and calibration procedures and the repair parts lists must be usable by depot technicians and supply personnel. Acquisition of minor hardware accessories in support of the maintenance and calibration of an item should not affect the determination of the item's supportability.

- State of the Art. The PIL candidate must reasonably reflect the current state of the art for that type of TMDE.
- Manufacturer Support. The manufacturer must be willing to provide logistic support for the PIL candidate. This includes maintenance and calibration, repair parts, and training. Most TMDE manufacturers will make available video tapes on the operation, calibration, and maintenance of their equipment.

3.2.2.5 Funding and Budgeting (II)

Time Period II encompasses the establishment of TMDE assets funding policy. There are several sources of funds to support the objectives of the DTMPP. Each potential TMDE funding source must be investigated, related policies and procedures documented, and a complete funding program developed. The program will include the approach; the responsible agencies; and the identification, timing, and location of funding activities. Three possible TMDE fund sources are discussed below:

- OMA Funds. DESCOM is allocated "X" dollars on OMA (Operations and Maintenance, Army) funds annually. Some of these funds, to be identified as "T", are expended in support of depot TMDE. The items these funds are used to pay for include the calibration, maintenance, repair parts, and transportation required to maintain the DESCOM TMDE inventory. The various cost elements and their respective dollar amounts that make up "T" must be identified. Implementation of an OMA funds program could yield cost savings from several sources, for example:
  - Extending calibration intervals. Assuming that the cost to calibrate is $25 per hour and 1000 hours is required annually to calibrate a population of a specific make/model, a saving of $5000 can be realized by extending the calibration interval to a point where the number of hours required to calibrate the instruments annually is reduced to 800 hours (200 hours times $25).
  - Removing items from the calibration cycle. Assuming a cost of $1 million to calibrate DESCOM TMDE annually, the removal of 5 percent from the calibration cycle would yield a $50,000 saving.
  - Turning in excess TMDE. Assuming a DESCOM TMDE population of 30,000 items, a reduction of 10 percent could yield significant savings in calibration and in maintenance costs.

  There are, of course, other activities that can yield OMA funds for procurement of PIL TMDE. These activities should be developed and coordinated within and between TMDE Management Groups.
  - Two keystones to the OMA funding policy are (1) that DESCOM require each depot to identify on a yearly basis, where possible, OMA savings from the funds allotted for TMDE support and (2) that all such funds identified be set aside in support of activities for the DTMPP.

- RDTE Funds. As new Army systems are developed and a depot or depots are selected to support the new end item, the Program Manager (PM) for the new system purchases support equipment for both the field and the supporting depots. To implement the RDTE funds policy, DESCOM must participate in the early support planning for the end item with the PM. The objective is to influence the PM to support the DTMPP by procuring DESCOM PIL TMDE or to provide the funds for DESCOM to initiate the procurement action. This action should yield dollar savings for the PM, especially if he is relieved of responsibility for procuring full military support for depot-unique TMDE.

- TMDE Replacement Funds. As asset visibility is realized, DESCOM will begin forecasting future TMDE requirements to modernize the TMDE inventory and to meet changing mission requirements. A continuous replacement program for DESCOM's TMDE inventory will enhance the depot's mission capabilities, promote TMDE standardization, and reduce logistics cost because the availability of a modern TMDE inventory will reduce the investment cost for setting up new or unusual production lines or support systems. Further, modern TMDE are generally more reliable and easier to maintain and have greater intervals between calibrations.

3.2.3 Time Period III

Time Period III covers six of the functional areas shown in Figure 3-1.

3.2.3.1 Program Management (III)

The following program management activities take place in Time Period III:

- Review Depot Mission, Goals, and Objectives. The purpose of this activity is to review the depot mission, goals, and objectives to ensure that they coincide with and complement the DTMPP objectives. This includes the identification of DARCOM, DESCOM,and Depot regulations which may require modification or deletion. Further, during the review, resources required to accomplish the DTMPP objectives will be determined and plans developed for their accomplishment. The review will be conducted by each Depot TMDE Management Group. The results, with recommendations, will be forwarded through command channels to the DESCOM TMDE Management Group, which will consolidate the inputs and provide to the CG DESCOM a report containing:
  - Results of the review
  - Recommendations

3.2.3.2 Assets Accountability (III)

The following assets accountability activities take place in Time Period III:

- Conduct Inventory of Current TMDE Assets. TMDE asset visibility is necessary to promote proper utilization of assets, forecast future TMDE requirements and funding, develop and refine the DESCOM PIL, and develop the TCR. It is thus essential for managing the DTMPP and meeting its objectives.

  It is estimated that there are more than 20,000 individual reportable TMDE within DESCOM. Because of this volume, with its related data and processing requirements, an ADP system is required to produce the management reports needed for controlling the DTMPP activities. The reports derived from the asset files are described in Appendix C.

  The asset reporting system must be designed to minimize the inputs from the depot activities. For example, they would report the NSN/MCN, SN, and location to the central computer, where all the common data elements related to that NSN/MCN are stored -- e.g., LIN, nomenclature, calibration level and interval, and recommended PIL replacement. The common data are matched to the depot-unique data, and various output reports are formed.

  > Note: The current DESCOM Depot Maintenance Capability/ Capacity and Engineering Data Report (RCS DRCMA-131) Subsystem, with modifications, offers a framework for providing DESCOM TMDE asset visibility.

  To manage DESCOM TMDE assets effectively and to develop the PIL, each make and model (M/M) of TMDE must be properly classified and the classification coded because the definition of TMDE (i.e., reportable TMDE) applies to numerous different types of instruments found within DESCOM. Therefore, during the inventory process and DESCOM PIL process, each M/M will be assigned a series of four separate codes (see Appendix B for an explanation of each code):

  - TMDE Class Code
  - Preferred Item List Category Code
  - TMDE Type Code
  - Supplemental Information Code

  During the DESCOM TMDE inventory, for each M/M that is not listed in DA PAM 700-20 and 21, a DA Form 4062-R must be completed in accordance with AR 750-43. Further, for each M/M not listed in TB 43-180, a DA Form 3758 must be completed in accordance with TB 750-25.

- Analyze Inventory of Current TMDE Assets. The analysis of the TMDE asset data as displayed in the management reports (see Appendix C) will provide insight into the composition of the DESCOM TMDE. For example, the number of makes and models and the quantity of each M/M will be available, as well as their location. The number of standard and nonstandard TMDE will also be known. From the analysis, the program direction and points of emphasis can be more accurately determined.

- Asset data will be used to develop the DESCOM PIL and the TMDE Funding Plan. Asset visibility will permit the loan or permanent transfer of TMDE assets among the depots.

3.2.3.3 Funding and Budgeting (III)

The funding and budgeting activities in Time Period III will be directed toward the development of a TMDE Funding Plan. This plan will provide detailed information on each of the potential funding sources. It will describe activities and assign responsibilities. The plan, to be updated annually, will include in an appendix the latest budget estimates, both current and out year.

3.2.3.4 Calibration and Maintenance (III)

The calibration and maintenance activities in Time Period III will be directed toward an assessment of the current TMDE Support System. Maintenance management in the DESCOM TMDE Program is accomplished by establishing calibration and maintenance policies and continuously assessing and adjusting these policies as required. The planning process must identify and schedule required calibration, institute improved maintenance procedures, and continuously assess the status and material condition of the TMDE. Further, during this activity, each depot's and depot activity's TMDE support system must be assessed to determine whether these systems are uniform and whether (and in what form) cost data related to calibration and repair are available. The assessment will encompass the following:

- Evaluation of Current Documentation and Calibration System Support. One of the key elements in the support of U.S. Army materiel at the depot is TMDE. Therefore, DESCOM has responsibility for the effective operation and maintenance of these TMDE. To meet the support requirements of the DESCOM TMDE, calibration procedures, maintenance instructions, and repair parts lists are needed for calibration and repair. Technical manuals (TMs) and commercial manuals provide maintenance instructions and repair parts listings, while Technical Bulletins (TBs) provide calibration procedures and identify the required TMDE standards. Calibration instructions and TMDE standards are also prescribed in Air Force Technical Orders (TOs), Navy TMs, and manufacturers' service manuals.

  The first step in evaluating the current calibration system support is to determine the DESCOM calibration support to the TMDE located at the depots. The basic objective would be to identify those

TMDE items which could be calibrated by the available calibration systems and those which could not be calibrated. For the latter, alternative calibration standards that could meet the calibration requirements should be investigated. The following specific tasks should be accomplished:

- Determine TMDE technical characteristics
- Identify applicable calibration documents
- Review calibration documents to determine the calibration requirements of the TMDE
- Determine the parameters of the existing calibration systems
- Determine the calibration supportability of the DESCOM TMDE

The results of this evaluation would be the development of a list of calibration TMDE that would meet the calibration requirements of the DESCOM TMDE.

The second step is to evaluate the availability and adequacy of the maintenance procedures for the depot TMDE. This effort entails a thorough review of the current maintenance instructions and repair parts listings for the depot TMDE. The results of this review would indicate the adequacy of the current maintenance procedures. If some of these procedures were found to be unavailable or inadequate, steps would have to be taken to prepare accurate, complete, and easily understood procedures.

- *Calibration and Repair System.* The present concept within DESCOM is to calibrate (including repair incidental to calibration) TMDE at one activity and repair TMDE at another activity. To expedite this calibration and repair, the current system should be restructured. The concept of a "one step" system, in which an item of TMDE would be forwarded to one activity that is responsible for both calibration and repair, should be implemented. Since calibration standards are calibrated and repaired by the U.S. Army Calibration and Metrology Center, a calibration support procedure must be established between the depots and the Center.

  The TMDE support systems must be uniform in the documentation required and the data elements collected to ensure that DESCOM-wide TMDE support data can be consolidated in a meaningful format for presentation to higher headquarters.

3.2.3.5 Automatic Test Equipment (ATE) (III)

The following ATE activities take place in Time Period III:

- Establish ATE Objectives and Requirements. The application of Automatic Test Equipment (ATE) to support U.S. Army materiel, both in the field and at the depot level, is increasing. Further, the Army is formulating ATE policies and assigning responsibilities. The depots will have a role in the Army ATE program, but that role

remains to be clearly established. Therefore, the purpose of this activity is to determine the role that DESCOM envisions in the ATE program by establishing the DESCOM ATE objectives and requirements.

To develop these objectives, a lead depot will be appointed to conduct an in-depth study of current and anticipated DA ATE objectives and formulate the envisioned DESCOM role in the Army ATE program. Possible ways in which the depots can have an active role in addition to using ATE in supporting the DESCOM mission are as follows:

- Verify, validate, test, and upgrade ATE software, including both system and test program sets software
- Manufacture and/or modify replacement interface devices
- Provide ATE Field Service Teams (both hardware- and software-oriented)

The DESCOM ATE study will also consider Depot ATE requirements on the basis of the following:

- Current and projected workload requirements
- ATE cost vs. benefits derived
- The maintenance role of the depot in the foreseeable future -- next 5 years, 5 to 10 years, 10 to 20 years

- Monitor Current Depot ATE Developments and Studies. The lead depot will monitor and analyze current DoD ATE programs and studies to be used as input data for the DESCOM ATE program.

3.2.3.6 Education and Training Programs (III)

The education and training program activities begin in Time Period III and are concentrated on development of a TMDE educational program. The programs will be used to educate DESCOM and other organizations' personnel on the DESCOM TMDE Program and to obtain their acceptance and support. It is intended to inform all levels of DESCOM management on the policy, objectives, procedures, and benefits of a DESCOM TMDE Program. It should also be presented to all coordinating commands, e.g., CTA, DARCOM, etc. All depot personnel who will be involved in the TMDE program will be given a comprehensive understanding of the DESCOM TMDE Program and the potential benefits their participation will bring to DESCOM and their respective depots.

3.2.4 Time Period IV

3.2.4.1 Program Management (IV)

The program management activities of Time Period IV are concentrated on evaluating the effectiveness of established TMDE subsystems. The assessment conclusions resulting from the asset management reports will provide DTMPP management with data needed to determine the effectiveness of

the current subsystems and their respective elements. At this time, the decision process for continuing or adjusting the subsystems can be made. Further, the effectiveness of the DTMPP policy and procedures will be evaluated and realigned according to the needs of the DTMPP.

3.2.4.2 Assets Accountability (IV)

The assets accountability activity of Time Period IV consists of reassessing depot TMDE requirements. On the basis of the data derived from the reports listed in Appendix C, depot TMDE requirements can be reviewed, evaluated, and accurately forecasted. The purpose of the forecast methodology is to establish the base for determining the required funding level needed for replacing obsolete TMDE. These funds are then requested through the normal Army budget process.

3.2.4.3 Acquisition Process (IV)

The acquisition process in Time Period IV is concerned with developing a forecast and schedule for replacing TMDE. This activity is designed to maintain an inventory of the most efficient TMDE for DESCOM to perform its mission, and it requires that DESCOM continuously review the status of its assets and maintain an awareness of the developments in the TMDE field. Initial forecasts of TMDE replacements will be based on the quantity and life expectancy of the current DESCOM TMDE items. From the data developed in the initial forecast, a schedule for replacement can be prepared. Subsequent forecasts and schedules should take into account the developments in the TMDE field and the changing missions of the depots.

The forecast methodology starts with a technology assessment of a specific type of TMDE and determines its useful life and its unit replacement cost. For example, if there are 120 storage oscilloscopes, with a useful life of 15 years and a unit cost of $2000, the annual replacement cost for replacing 1/15 of the storage scopes is $16,000:

[120 (population) ÷ 15 years] × $2000 = $16,000

Whether the scopes are actually procured is a decision that must be made on the basis of the total requirements for all types of depot replacement TMDE and the availability of funds. Further, the numbers and types of TMDE required are continually refined to ensure that only mission-essential TMDE are procured or that procurement of replacement TMDE will enhance the mission capability and reduce TMDE support cost.

3.2.4.4 Preferred Items List (PIL) (IV)

The PIL activities of Time Period IV are concerned with developing the DESCOM PIL on the basis of the activities performed in Time Periods II, III, and IV -- i.e., the PIL Selection Criteria, the DESCOM TMDE Acquisition Policy, and the acquisition of TMDE asset data. The interaction of the interim PIL with the selection criteria and the acquisition policy will cause TMDE items to be added to the interim PIL. In addition, procurement of interim PIL items will validate their need in support of the depot

mission. Therefore, the DESCOM PIL will start to emerge from these sources. As asset visibility is obtained, each depot will begin formulating its PIL recommendations. Each recommended item must fit within the constraints of the PIL Selection Criteria. Further, when the item is not listed in the DA TMDE Register, DA Forms 4062-R and 4062-1-R must be completed.

In a formal meeting of the DESCOM TMDE Management Group, the recommended PIL items from each of the depots will be reviewed and analyzed. With the support of data from the interim PIL, individual TMDE will be selected for the DESCOM PIL, with the concurrence of the DESCOM Director of Depot Operations.

New items can be added to the DESCOM PIL when new test and measurement requirements are established, when existing PIL items are no longer supportable or procurable, or when it is economically desirable. All DESCOM TMDE Management Group members must formally comment on the addition or deletion of PIL items. Actual changes to the PIL are by majority vote with the concurrence of the DESCOM Director of Depot Operations.

3.2.4.5 Funding and Budgeting (IV)

In Time Period IV budget action for new TMDE is initiated. The importance of budgeting for replacement TMDE cannot be overlooked. Action must be taken as soon as asset data have been analyzed and requirements determined, and all budgeting activities must be aggressively pursued. This activity is primarily directed toward the aggressive pursuit of funds, which includes providing data to higher headquarters as required and following all activities associated with the funding process.

3.2.4.6 Calibration and Maintenance (IV)

The following calibration and maintenance activities take place in Time Period IV:

- Develop TMDE Cost-Collection Subsystem. To perform economic analysis -- e.g., repair vs. replace, etc. -- cost data related to TMDE support must be available. This subsystem will assist the TMDE managers in determining the effectiveness of various actions in reducing the expenditure of OMA funds to support TMDE and provide back-up data for future years' funding requirements.

  The TMDE Cost-Collection Subsystem must be able to provide data via a common denominator to the DESCOM TMDE Project Management Office for consolidation and analysis. Since both the calibration and repair systems in TM 38-750 list the NSN/MCN as a data entry, the NSN/MCN will be the controlling element. Other data elements required include the item's serial number, its location, and the date on which action was taken. Because of the data volume, an automated system is required.

- Determine TMDE Repair Criteria. The determination of repair criteria is necessary to preclude the expenditure of critical funds for non-PIL TMDE and to ensure that PIL/mission-essential TMDE are quickly returned to service.

  The following guidance is provided relative to the repair of unserviceable organic DESCOM TMDE:

  - Repair of nonpreferred TMDE should be limited to essential requirements. It may be more economical to procure preferred TMDE than to repair nonpreferred TMDE. Repair action requiring the replacement of a repair part will not be initiated for non-PIL TMDE (except those coded "PP") with a density of less than 10 within the depot concerned. Exceptions to this policy may be requested through channels. The Depot Commander has approval authority.
  - For unserviceable preferred items of TMDE, it will be determined whether repair can be expected within 90 days. If it cannot, command assistance will be requested. TMDE coded PA, PB, PC, PD, and PP qualify as preferred items. TMDE coded AH, NC, and SP are treated in accordance with the priority established on the DA Form 2407 and the repair/washout criteria contained in TB 750-25 and TB 750-91-27.
  - For mission-essential nonpreferred TMDE (density greater than 10), it will be determined if repair can be expected within 90 days. If it cannot, the nonpreferred TMDE will be identified as unserviceable/excess, and action will be taken to initiate replacement with a preferred item of TMDE.
  - TMDE designated for turn-in to property disposal may be retained for cannibalization.

- Collect Cost of Current TMDE Support System. As the TMDE support system documentation requirements are standardized, TMDE cost data related to the system will be collected and forwarded to the DESCOM TMDE Project Management Office on a quarterly basis. The data are provided by each depot or depot activity expending funds in support of TMDE. The data are then consolidated by TMDE make/model, type, category, and class for distribution to all concerned parties.

3.2.4.7 Automatic Test Equipment (ATE) (IV)

On the basis of the results of previous ATE activities, a DESCOM ATE Program will be developed in Time Period IV. The program includes the following as a minimum:

- A description of the envisioned DESCOM ATE role
- DESCOM ATE objectives
- DESCOM ATE requirements (hardware)

- Resources required to obtain the objectives
- ATE cost vs. benefits analyses
- DESCOM ATE software involvement

3.2.4.8 Education and Training Programs (IV)

The Education Program will be presented to DESCOM Headquarters in Time Period IV to inform all of the management personnel at DESCOM Headquarters of the DESCOM TMDE Program. The presentation will concentrate on the responsibilities of the DESCOM Headquarters personnel who will be intimately involved in managing the TMDE program.

3.2.5 Time Period V

Time Period V covers six functional areas as shown in Figure 3-1.

3.2.5.1 Program Management (V)

Program management activities in Time Period V will be devoted to developing a TMDE Performance Assessment System from the data collected, processed, and analyzed during all previous short-range activities. The purpose of this program is to select those data elements that are significant and to display them in a manner that will indicate the progress and the problem areas associated with the DTMPP.

3.2.5.2 Acquisition Process (V)

In Time Period V, the developed TMDE Acquisition Process will be evaluated and, if necessary, refined to streamline its operation.

3.2.5.3 Preferred Items List (PIL) (V)

The following PIL activities take place in Time Period V:

- Determine Depot Support Program (TMDE) Requirements. The purpose of the Depot Support Program is to prevent work stoppages due to the failure of a critical TMDE item by immediately providing a replacement TMDE. This can be accomplished by reviewing past TMDE-related work stoppages and critical points (bottlenecks) on current or anticipated production lines. The application, feasibility, and the numbers and types of TMDE can then be determined. On the basis of requirements, funds must be programmed and policies formulated.
- Develop TMDE Engineering Aids Document. The TMDE engineering aids will be developed to facilitate the application and utilization of those TMDE appearing in the DESCOM PIL. The aids will consist of TMDE parameter charts and application indexes. The parameter charts provide a visual display of the characteristics of each PIL TMDE. The application indexes assist the user in selecting the correct

PIL item for the type of test or measurement required and determining the complete functional range of test and measurement capabilities of each PIL item. The aids are also used to develop the TMDE Cross-Reference list.

The engineering aids are derived from a detailed review and analysis of each DESCOM PIL item.

3.2.5.4 Calibration and Maintenance (V)

The calibration and maintenance activities of Time Period V are devoted to assessing calibration and repair support from the Metrology Command. Several of the DESCOM depots have calibration missions and therefore depend on the U.S. Army Calibration and Metrology Center for support. The adequacy and timeliness of this support must be continuously reviewed and the Metrology Center influenced to meet the needs of DESCOM. Of special concern will be their responsiveness in providing calibration standards to support new missions and to improve the current calibration processes.

The DESCOM TMDE Project Management Office will establish a day-to-day working relationship with personnel in the Metrology Center and ensure that they are aware of DESCOM activities that may affect the level of support being provided.

3.2.5.5 Automatic Test Equipment (V)

In Time Period V, the ATE Program developed during previous activities will be implemented.

3.2.5.6 Education and Training Programs (V)

The Education Program will be presented to DARCOM and others in Time Period V. The purpose of this presentation is to inform DARCOM Headquarters, DA Central TMDE Agency, commodity commands involved with DESCOM, and any other appropriate organization of the DESCOM TMDE Program. The presentation will concentrate on the involvement of those organizations in the DESCOM TMDE Program and the benefits the Army will realize from the program.

3.2.6 Time Period VI

Time Period VI covers seven of the functional areas shown in Figure 3-1.

3.2.6.1 Program Management (VI)

The following program activities take place in Time Period VI:

- Implement TMDE Performance Assessment System. The purpose of this activity is to implement the DTMPP performance assessment system.
- Implement DESCOM TMDE Five-Year Management Program Plan. The implementation of the DESCOM TMDE Five-Year Management Program Plan

furnishes data for the DARCOM TMDE FYPP and reports progress in accomplishing TMDE-oriented tasks. The document can also be used to publicize the DTMPP program elements within the U.S. Army. Each depot will report progress on each assigned task to DESCOM. The depots may identify additional tasks unique to their depots and describe the activities associated with those tasks. DESCOM will consolidate all entries as appropriate and forward to DARCOM.

- Submit Quarterly TMDE Activity Reports to DARCOM. The quarterly TMDE Activity Report is submitted to DARCOM and describes TMDE progress during the reporting period on each of the DESCOM-assigned TMDE tasks.

3.2.6.2 Assets Accountability (VI)

The assets accountability effort of Time Period VI will be to change Section III of the Table of Distribution and Allowance (TDA) of each depot to reflect authorization of DESCOM PIL TMDE wherever applicable. This change applies only to those LINs having a TMDE category code of PP or XX.

3.2.6.3 Acquisition Process (VI)

The following acquisition process activities take place in Time Period VI:

- Acquire New PIL TMDE Using Available Funds. The purpose of this activity is to initiate the acquisition of PIL TMDE to replace nonsupportable TMDE and reduce the number of makes and models within the DESCOM TMDE inventory. This activity is dependent upon the ability of DESCOM to obtain funds from within its own resources. Possible sources of OMA funds could be adjustment of calibration intervals, disposal of excess TMDE, and elimination of repair action on non-PIL TMDE.
- Implement TMDE Replacement Program. The purpose of this activity is to commence replacing current inventory TMDE with PIL TMDE.

3.2.6.4 Preferred Items List (PIL) (VI)

The following PIL activities take place in Time Period VI:

- Develop TMDE Cross-Reference (TCR) List. The TCR provides an official DESCOM document listing DESCOM PIL replacements for each make/model of non-PIL TMDE identified. TCR data will assist in forecasting TMDE requirements, in adjusting TDA documents to reflect PIL items, and in determining interchangeability of TMDE. The TCR will also provide source data for economic analyses associated with the PIL, e.g., how many makes/models are replaced by each PIL item.

  The TCR is initially formulated by the Depot TMDE Management Group at each depot. By using the asset listings of non-PIL TMDE and the DESCOM PIL, the group selects the best PIL replacement item for each

non-PIL item. The recommendations are forwarded to the DESCOM TMDE Management Group where inputs are consolidated to develop the TCR.

The TCR is published semiannually, and changes are made as they occur by adjusting the central data file.

- Continually Review and Update DESCOM PIL. The two primary objectives of the PIL are to promote standardization and to maintain DESCOM TMDE inventory current with the state of the art. At first, these two objectives appear to be conflicting and would in fact be in conflict if the PIL could not respond to the user's needs. However, as new test requirements are identified and justified, new state-of-the-art TMDE will appear on the PIL. By selecting the best available TMDE on the basis of current and anticipated future needs, a higher level of standardization is achieved.

  The PIL must be dynamic and responsive to the needs of the depot. It can be made so by periodic reviews of all PIL items -- e.g., is the item procurable or do requirements exist? It can, however, be best accomplished by keeping DESCOM personnel familiar with the program in all the key TMDE management positions. Only in this way can the acquisition process, which adds new PIL items, function smoothly and maximize the benefits of the PIL to DESCOM and the Army. The PIL is published semiannually. As new PIL items are added, the DESCOM TMDE Project Management Office will advise all Depot TMDE Project Management Offices.

- Implement Depot Support Program (TMDE). The implementation of this Program is contingent upon the determination that the need for such a program exists. If the need exists, applicable policies and procedures must be formulated, coordinated, and implemented.

3.2.6.5 Funding and Budgeting (VI)

Funding and budgeting activities of Time Period VI are concentrated on obtaining funds to acquire new TMDE. As funds are obtained, they are applied against short-range requirements and then against the forecasted replacement requirements. The GSA schedule offers the fastest means of obtaining small quantities of TMDE and should be used for all short-range requirements and when funds must be committed by a specific date. When large procurements are involved, several approaches are available. For example, the funds could be transferred to another DoD agency when that agency is purchasing TMDE meeting DESCOM's requirements; or, for a new system, the prime contractor could be directed by the PM to purchase the required TMDE in accordance with the contract requirements.

3.2.6.6 Calibration and Maintenance (VI)

The following calibration and maintenance activities take place in Time Period VI:

- Evaluate Cost Savings by Modifying TMDE Support System. Each depot is responsible for improving the TMDE support system, documenting

the cost savings, and sharing cost-reduction ideas within DESCOM. Therefore, each recommended modification must be evaluated and approved by the Depot TMDE Management Group and a cost savings verification method developed. Potential areas in which cost savings may be realized are:

- Turn-In of Excess TMDE. The requirements for all on-hand TMDE should be determined and excess items turned in. The fact that a TMDE item is listed in a technical manual or authorized by the TDA should not be the basis for its retention. All TMDE must be screened continually by individual LINs to determine whether it is excess to the missions. Excess TMDE can generally be categorized as:
  - Excess to the maintenance/test authorizations
  - Excess because there is no identified functional requirements
  - Excess because there is duplication of on-hand TMDE assets
- Removing TMDE from the Calibration Cycle. TMDE which is not in use but for which known requirements are anticipated should be moved to an administrative storage area and a CBU (Calibrate Before Using) label attached to the instrument.
- Extending Calibration Interval. The calibration interval for TMDE is usually determined by the "worst case" situation. The depot environment does not fit the worst-case situation, therefore, calibration intervals currently set for a specific time period can conceivably be extended by as much as 100 percent without noticeable loss in measurement accuracy. The recommended course is to extend intervals by 25 percent, monitor for 6 to 18 months, and then, if feasible, adjust an additional 25 percent, etc., until the original interval has been doubled. For example, if the interval is 120 days, adjust to 150, then 180, then 210, and finally 240.
- Changing Calibration Levels. If TMDE is not being used where a high degree of accuracy is required, the calibration level should be changed.
- One-Step Calibration and Repair Services. The establishment of a one-step calibration and repair service will eliminate paperwork and transportation time required to return a serviceable instrument to the customer.

- Modify TMDE Support System. Each modification to the support system must be completely documented and approved by the Depot TMDE Management Group. Once the modification has occurred, it must be monitored, results tabulated, and derived benefits reported through channels to the DESCOM TMDE Project Office.

3.2.6.7 Education and Training Programs (VI)

The following education and training program activities take place in Time Period VI:

- Present Education Program to the Depots. The purpose of this presentation is to indoctrinate depot personnel involved with the DESCOM TMDE Program. It will concentrate on the organization, functions, and responsibilities of the depots and the benefits to be obtained.
- Identify Personnel Training Requirements. The purpose of this activity is to ensure that the personnel maintaining and operating the DESCOM TMDE are thoroughly trained. Initially, DESCOM must identify the types of equipments it has and the capabilities of the personnel to operate and maintain these equipments. Once this is accomplished, a three-phase program must be developed. The first phase should be the training of new personnel on current TMDE; the second phase should be a refresher course for the technical personnel that will give them the latest information on the equipment that they are using. The third phase is concerned with new TMDE. It should consist of formal school training and in-depot training on newly acquired TMDE.
- Initiate Training Program. The purpose of this activity is to initiate and maintain a training program for depot TMDE.

APPENDIX A

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APPENDIX B

DEFINITION OF TERMS

The following definitions of terms are applicable to the DESCOM TMDE Management Program Plan (DTMPP).

Depot TMDE Management Group (DPTMG): A management group charged by the Depot Commander with the responsibilities described in paragraph 2.2.4.3.

Depot TMDE Project Management Office (DPTPMO): An office established by the Depot Commander for the purpose of managing the Depot TMDE program.

Depot TMDE Project Officer (DPTPO): An individual charged by the Depot Commander with the responsibilities described in paragraph 2.2.4.2.

DESCOM Management Control Number (MCN): A locally assigned 13-position number for identifying any new TMDE entering the system not having an assigned National Stock Number (NSN).

DESCOM Preferred Items List (PIL): A list of standard and supportable preferred TMDE that are selected to support the DESCOM mission.

DESCOM Preferred TMDE: The minimum, essential, supportable items needed to perform the mission. Preferred items must be obtainable.

DESCOM TMDE Cross-Reference (TCR) List: A TMDE listing that correlates possible non-PIL to PIL replacement combinations and assists in determining the PIL TMDE replacement for non-PIL TMDE.

DESCOM TMDE Management Group (DTMG): A management group charged by the Director of Depot Operations with the responsibilities described in paragraph 2.2.3.3.

DESCOM TMDE Management Program: A management program applicable to DESCOM TMDE materiel throughout its life cycle. It includes control, acquisition, and management of TMDE assets and depot management group activities.

DESCOM TMDE Project Management Office (DTPMO): An office established by the Director of Depot Operations to provide program direction and management support to the depots and depot activities.

DESCOM TMDE Project Officer (DTPO): An individual charged by the Director of Depot Operations with the responsibilities described in paragraph 2.2.3.2.

General Purpose TMDE: TMDE that provides operational and maintenance support for more than one end item of equipment.

Reportable TMDE: TMDE (including associated accessories, components, and hardware that are organic to DESCOM) that meet one or both of the following criteria:

- They are classified as TMDE in accordance with AR 750-43 and/or DA Pamphlet 700-21.
- They require calibration. (Note: If the accessory, component, or hardware is calibrated in conjunction with the TMDE end item or accounted for as an integral part of LIN identifying the end item, it will not be reported separately.)

Reportable TMDE include system TMDE that are a part of fixed or transportable systems but does not include BITE unless the BITE item requires calibration.

Special Purpose TMDE: TMDE designed exclusively for or that have application to only one weapon system. It excludes those TMDE that were previously designed to support a single specific system and are now being used to support additional systems.

Supportable TMDE: TMDE including calibration procedures, supporting maintenance publications, and readily available repair parts. The source of the documentation and repair parts may be within the DoD or in the commercial market.

TMDE Classification Codes: Four specifically sequenced codes used to classify each make/model of DESCOM TMDE for control and management of assets are listed below.

- TMDE Class: There are four classes of TMDE in DESCOM and all DESCOM TMDE that are reportable will be classified into one of the following classes and coded as indicated:
  - Electronic/Electrical - Code E
  - Mechanical - Code M
  - Weights and Measures - Code W
  - Density and Pressure Devices - Code D
- TMDE Category: Any of four categories of preferred TMDE and six categories of nonpreferred/not controlled TMDE in DESCOM; all DESCOM TMDE that are reportable will be categorized and coded as indicated:
  - Preferred Items Code:
    - Preferred Item Alpha (PA). A general-purpose TMDE for new requirements and replacement of nonrepairable, nonpreferred,

or nonstandard TMDE. PA items are applicable for all valid requirements within their functional characteristics. They must have the potential to support more than one end item of equipment or other testing requirements, must reasonably reflect the latest state of the art, and must be supportable.

- Preferred Item Bravo (PB). A general-purpose TMDE similar to and meeting all the requirements for a PA item. However, PB items are highly sophisticated TMDE that require special operating skills and handling.
- Preferred Item Charlie (PC). A TMDE that is primarily used as a calibration standard and reflects the latest state of the art.
- Preferred Item Delta (PD). TMDE normally deployed with a system in a developmental or experimental situation; can be considered a future candidate for PA, PB, or PC category.

- Nonpreferred/not controlled items code:
  - Past Preferred (PP). Includes TMDE previously on the Preferred Items List, older models of TMDE currently on the Preferred Items List, and mission-essential items. Items in this category are considered "preferred" for the repair criteria established in paragraph 3.2.4.6.
  - Special Purpose (SP). TMDE designed exclusively for or with application to only one weapon system.
  - Accessories and Hardware (AH). Items associated with both preferred and nonpreferred TMDE that are normally used to provide an interface between the TMDE and the device under test. These items are controlled only through acquisition of the equipment and TMDE end items. The general types of items included in this category are listed in Chapter 3 of AR 750-43.
  - Not Controlled (NC). Items not controlled by DESCOM; include TMDE such as radiac meters or other general-purpose TMDE required for support of customer-owned project equipment (COPE).
  - Cannot Identify (UK). TMDE requiring information to categorize properly.
  - Non-PIL (XX). Nonpreferred TMDE to be replaced by a preferred TMDE.

- TMDE Type Code: The TMDE type code consists of three numeric characters indicating the specific instrument family, e.g., oscilloscope, multimeter, spring gage. A type code is assigned to each make/model; there are 999 possible type codes further divided into the following groups:
  - 000-299 General-Purpose TMDE
  - 300-399 Calibration Standards TMDE

- 400-499 Special-Purpose TMDE
- 500-599 TMDE Accessories
- 600-699 TMDE Hybrids, e.g., signal generator, frequency counter, and power meter combined
- 700-799 TMDE Coded NC (Not Controlled)
- 800-999 Not assigned

- Supplemental Information Code: a code complementing the TMDE type code by providing the following supplemental information:
  - Automatic Test Equipment (A). This denotes automatic or semi-automatic test equipment.
  - Portable TMDE (P). This type of instrument operates from a self-contained (to include battery packs) or induced power source.
  - Bench TMDE (B). Bench-type TMDE are mobile and must operate from an ac power source.
  - Rack-mounted TMDE (R). This instrument type must be mounted in a frame during normal operations.
  - Plug-In TMDE (X). This is applicable to plug-in TMDE items that are not physically a part of the TMDE end item as described by the LIN/NSN/MCN.
  - Not Applicable (N). Supplemental information codes are not applicable to this item.

APPENDIX C

DESCOM TMDE REPORTS

This appendix provides a description of TMDE asset reports and the data element composing them, as recommended for use by DESCOM to monitor and control the DTMPP. Table C-1 shows which data elements are associated with given TMDE reports.

Symbol	Title	Description
A	TMDE Register	This report is a listing of all TMDE data contained in the data bank, with the primary purpose of asset identification. It indicates calibration requirements and procedures and the PIL replacement item of a non-PIL. It supplies all known identification elements associated with individual items (e.g., model number, stock number).
B	TMDE Statistical Summary	This report provides a summary of type-classification (i.e., standard and nonstandard) calibration levels and intervals, dollar values, and percentages of PIL and non-PIL within the reporting area. It should be used to determine the amount of work required at a depot to ensure calibration of equipment.
C	TMDE Command Density	This report indicates the total assets of each type (make or model) of TMDE by Joint Electronic Type Designation System (JETDS) or manufacturer's model number and its location. It can aid DESCOM in redistributing TMDE assets and in locating and allocating critical TMDE resources.
D	TMDE Calibration Index	This report identifies known calibration procedures for TMDE items. It is sorted by JETDS/manufacturer model number and provides the necessary calibration procedures, with

Symbol	Title	Description
D	TMDE Calibration Index (continued)	the level and interval of calibration. It is a secondary source for identifying each TMDE requiring calibration.
E	TMDE Density in Descending Order	This report provides (in descending order) the density of all TMDE within each TMDE type code. It can aid the depots in controlling proliferation of TMDE items by identifying low-density and one-of-a-kind for potential elimination.
F	Low-Density TMDE Listing	This report provides TMDE composite information within DESCOM of TMDE quantities of 10 or less. It should be used to assist in eliminating low-density nonpreferred TMDE within the DESCOM.
G	TMDE NSN Sequential Listing	This report is a sequential listing, by National Stock Number or Management Control Number, of all TMDE in the TMDE data base.
TCR	TMDE Cross-Reference List	This report lists all non-PIL TMDE and their recommended TMDE PIL replacements. It is used to determine the preferred replacement for *nonpreferred, obsolete, or nonrepairable* TMDE.
T	Authorized On-Hand, Substitute, and Shortage	This report lists the number of authorized TMDE, those actually on-hand or substituted, and those in short supply. It is compiled from the TMDE asset data file and each unit's TDA.

Table C-1. DATA ELEMENTS ASSOCIATED WITH TMDE REPORTS

Data Description	TMDE Management Report								
	A	B	C	D	E	F	G	TCR	T
Calibration Interval	X	X		X			X		
Calibration Level	X	X		X			X		
Calibration Procedures	X			X			X		
Commodity Manager Code (CMC)	X				X	X	X		X
Fund Code (ABA)	X				X	X	X		X
JETDS	X		X	X	X	X	X	X	X
Line Item Number (LIN)	X		X	X			X	X	X
Location			X						X
Logistic Control Code (LCC)	X		X		X	X	X		X
Manufacturer's Code	X		X	X			X		
Manufacturer's Model Number	X		X	X	X	X	X		X
Manufacturer's Name			X	X					
Nomenclature	X		X	X	X	X	X		X
NSN/MCN	X		X	X	X	X	X		X
Quantity on Hand	X	X	X				X		X
Preferred Item Code	X		X		X	X	X		X
Replacement Item (for Non-PIL) NSN	X						X		
Serial Number			X						
TMDE Classification Codes	X		X	X	X	X	X		
Total Number of Separate Makes/Models		X			X	X			
Total Cost		X			X	X			
Type Classification		X							
Unit Cost	X		X		X	X	X		

APPENDIX B

DRAFT DESCOM REGULATION

This appendix contains the draft DESCOM Supplement 1 to AR 750-43 and DARCOM Supplement 1 to AR 750-43.

DEPARTMENT OF THE ARMY
HEADQUARTERS, DEPOT SYSTEM COMMAND

DESCOM Supplement 1
to AR 750-43

Maintenance of Supplies and Equipment
TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT

Issue of further supplements to this regulation by Depot/Deputy Activity Commanders is prohibited, unless specifically approved by HQ DESCOM.

AR 750-43, 24 July 1975, and CH 1, 22 September 1976, as supplemented by DARCOM Supplement 1, 18 February 1976, is further supplemented as follows:

Page i. At the end of the table of contents add:

Appendixes
D Acquisition of DESCOM TMDE - D-1
E PIL Selection Criteria - E-1
F DESCOM TMDE Management Program (DTMP) Reports - To be determined

Page 1-1, paragraph 1-1, Purpose. Add the following:

This supplement prescribes the Depot System Command (DESCOM) policies; establishes objectives; assigns responsibilities related to life cycle management of test, measurement, and diagnostic equipment (TMDE); and directs the requirements of the DESCOM TMDE Management Program Plan (DTMPP).

Page 1-1, paragraph 1-2, Scope. Add subparagraph e after subparagraph d.

e. This supplement applies to Headquarters, DESCOM, and DESCOM depots and depot activities.

Page 1-1, paragraph 1-3, Objectives. Add subparagraphs f, g, and h after subparagraph e.

f. To develop and implement a DESCOM TMDE Management Program (DTMP) with the following goals:

(1) Enhance DESCOM's repair and overhaul capability and increase productivity by:

- Standardizing DESCOM TMDE
- Acquiring state-of-the-art TMDE

(2) Minimize TMDE support cost and maximize TMDE availability

(3) Increase assets visibility in order to promote maximum utilization and management control of TMDE assets

g. To reduce the number of makes and models within DESCOM TMDE inventory through standardization and elimination of unnecessary items and non-supportable TMDE

h. To control TMDE proliferation by:

(1) Mandatory procurement of TMDE from DESCOM Preferred Items List (PIL) and the DA PIL if the item is not on the DESCOM PIL

(2) Ensuring that new TMDE required for the DESCOM mission is included on the DESCOM and DA PILs

(3) Providing justification on TMDE to the DA Central TMDE Activity and the applicable Materiel Readiness Command to ensure that the DA PIL is kept current with DESCOM TMDE requirements and that DA PIL items reflect the latest state of the art when applicable, and are economically feasible

(4) Identifying, programming, and budgeting for TMDE requirements over a five-year period

Page 1-1, paragraph 1-4, Policy. Add subparagraphs p, q, r, s, t, and u after subparagraph o.

p. Requests for purchase of new TMDE will be approved only after verification that the functional tests required cannot be performed by TMDE currently on the DESCOM PIL and, secondly, by the TMDE on the DA PIL and:

(1) That logistics support currently exists or that acquisition action includes calibration procedures, repair standards, operator and maintenance manuals, and repair parts provisioning*

(2) That type classification processing will be initiated or type classification exemption obtained from the mission assignee

(3) That acquisition action for new TMDE will be processed in accordance with Appendix D or as directed

q. Acquisition of TMDE with local funds (Army Industrial Funds) will be initiated only after approval has been authorized in accordance with Appendix D.

r. A calibration and recall system will be established for DESCOM TMDE in accordance with AR 750-25, DARCOM Supplement 1 to AR 750-25, and AMCR 702-7.

*In the case of Off-the-Shelf (OTS) Electronic Test Equipment (ETE) provisioning is referred to as the availability of repair parts from the equipment manufacturers rather than the prepositioning of repair parts.

s. The official DESCOM PIL and TMDE Cross-Reference (TCR) List will be published by DESCOM semiannually, under a dated cover sheet. All preceding PIL and TCR publications will be considered void.

t. All DESCOM PIL candidate TMDE will be selected in accordance with the selection criteria as set forth in Appendix E.

u. All DESCOM TMDE is reportable in accordance with the criteria set forth in paragraph 1-5v (TMDE Management Program reports will be included as Appendix F to this supplement.)

Page 1-2, paragraph 1-5, Explanation of terms. Add subparagraphs j through y following subparagraph i:

j. Depot TMDE Management Group (DPTMG). A management group designated by the Depot Commander and charged with the responsibilities described in paragraph 2-26.

k. Depot TMDE Project Management Office (DPTPMO). An office established by the Depot Commander for the purpose of managing the Depot TMDE program.

l. Depot TMDE Project Officer (DPTPO). An individual designated by the Depot Commander and charged with the responsibilities described in paragraph 2-28.

m. DESCOM Management Control Number (MCN). A locally assigned 13-position number for identifying any new TMDE entering the system not having an assigned National Stock Number (NSN).

n. DESCOM Preferred Items List (PIL). A list of standard and supportable preferred TMDE that are selected to support the DESCOM mission.

o. DESCOM Preferred TMDE. The minimum, essential, supportable items needed to perform the mission. Preferred items must be obtainable.

p. DESCOM TMDE Cross-Reference (TCR) List. A TMDE listing that correlates possible non-PIL to PIL replacement combinations and assists in determining the PIL TMDE replacement for non-PIL TMDE.

q. DESCOM TMDE Management Group (DTMG). A management group designated by the Director of Depot Operations and charged with the responsibilities described in paragraph 2-22.

r. DESCOM TMDE Management Program. A management program applicable to DESCOM TMDE materiel throughout its life cycle. It includes control, acquisition, and management of TMDE assets and depot management group activities.

s. DESCOM TMDE Project Management Office (DTPMO). An office established by the Director of Depot Operations to provide program direction and management support to the depots and depot activities.

t. DESCOM TMDE Project Officer (DTPO). An individual designated by the Director of Depot Operations and charged with the responsibilities described in paragraph 2-27.

u. General Purpose TMDE. TMDE that provides operational and maintenance support for more than one end item of equipment.

v. Reportable TMDE. TMDE (including associated accessories, components, and hardware that are organic to DESCOM) that meet one or both of the following criteria:

- They are classified as TMDE in accordance with AR 750-43 and/or DA Pamphlet 700-21.
- They require calibration. (Note: If the accessory, component, or hardware is calibrated in conjunction with the TMDE end item or accounted for as an integral part of LIN identifying the end item, it will not be reported separately.)

Reportable TMDE include system TMDE that are a part of fixed or transportable systems but do not include BITE unless the BITE item requires calibration.

w. Special Purpose TMDE. TMDE designed exclusively for or that have application to only one weapon system. The term excludes those TMDE that were previously designed to support a specific system and are now being used to support additional systems.

x. Supportable TMDE. TMDE including calibration procedures, supporting maintenance publications, and readily available repair parts. The source of the documentation and repair parts may be within the DoD or the commercial market.

y. TMDE Classification Codes. Four specifically sequenced codes used to classify each make/model of DESCOM TMDE for control and management of assets are listed below.

TMDE Class: All DESCOM TMDE that are reportable will be classified into one of the following four classes and coded as indicated:

- Electronic/Electrical - Code E
- Mechanical - Code M
- Weights and Measures - Code W
- Density and Pressure Devices - Code D

TMDE Category: Any of four categories of preferred TMDE and six categories of nonpreferred/not controlled TMDE in DESCOM; all DESCOM TMDE that are reportable will be categorized and coded as indicated:

- Preferred Items Code:
  - Preferred Item Alpha (PA). A general-purpose TMDE for new requirements and replacement of nonrepairable, nonpreferred, or nonstandard TMDE. PA items are applicable for all valid requirements within their functional characteristics. They must have the potential to support more than one end item of equipment or other testing requirements, must reasonably reflect the latest state of the art, and must be supportable.
  - Preferred Item Bravo (PB). A general-purpose TMDE similar to and meeting all of the requirements for a PA item. However, PB items are highly sophisticated TMDE that require special operating skills and handling.
  - Preferred Item Charlie (PC). A TMDE that is primarily used as a calibration standard and reflects the latest state of the art.
  - Preferred Item Delta (PD). TMDE normally deployed with a system in a developmental or experimental situation; can be considered a future candidate for PA, PB, or PC category.
- Nonpreferred/not controlled items code:
  - Past Preferred (PP). Includes TMDE previously on the Preferred Items List, older models of TMDE currently on the Preferred Items List, and mission-essential items. Items in this category are considered "preferred" for the repair criteria established in paragraph 3-3g.
  - Special Purpose (SP). TMDE designed exclusively for or with application to only one weapon system.
  - Accessories and Hardware (AH). Items associated with both preferred and nonpreferred TMDE that are normally used to provide an interface between the TMDE and the device under test. These items are controlled only through acquisition of the equipment and TMDE end items. The general types of items included in this category are listed in Chapter 3 of AR 750-43.
  - Not Controlled (NC). Items not controlled by DESCOM; includes TMDE such as radiac meters or other general-purpose TMDE required for support of customer owned project equipment (COPE).
  - Cannot Identify (UK). TMDE requiring information to categorize properly.
  - Non-PIL (XX). Nonpreferred TMDE to be replaced by a preferred TMDE.

AD-A058 687 ARINC RESEARCH CORP ANNAPOLIS MD F/G 15/5
DESCOM TMDE MANAGEMENT PROGRAM.(U)
SEP 78 L GRAHAM, A SIMMONS, B PAIZ, S HERMAN DAEA18-72-A-0005
UNCLASSIFIED 1082-01-1-1795 NL

2 OF 2
AD A058 687

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TMDE Type Code: The TMDE type code consists of three numeric characters indicating the specific instrument family, e.g., oscilloscope, multimeter, spring gage. A type code is assigned to each make/model; there are 999 possible type codes further divided into the following groups:

- 000-299 General-Purpose TMDE
- 300-399 Calibration Standards TMDE
- 400-499 Special-Purpose TMDE
- 500-599 TMDE Accessories
- 600-699 TMDE Hybrids, e.g., signal generator, frequency counter, and power meter combined
- 700-799 TMDE Coded NC (Not Controlled)
- 800-999 Not assigned

Supplemental Information Code: a code complementing the TMDE type code by providing the following supplemental information:

- Automatic Test Equipment (A). This denotes automatic or semi-automatic test equipment.
- Portable TMDE (P). This type of instrument operates from a self-contained (to include battery packs) or induced power source.
- Bench TMDE (B). Bench-type TMDE are mobile and must operate from an ac power source.
- Rack-mounted TMDE (R). This instrument type must be mounted in a frame during normal operations.
- Plug-In TMDE (X). This is applicable to plug-in TMDE items that are not physically a part of the TMDE end item as described by the LIN/NSN/MCN.
- Not Applicable (N). Supplemental information codes are not applicable to this item.

Page 1-3, paragraph 1-6. Responsibilities. Add subparagraph n.1 and n.2 following subparagraph n.

n.1 The Director of Depot Operations HQ DESCOM is responsible for the following activities:

- Serving as the central DESCOM action office to develop and coordinate TMDE policy, giving final approval on TMDE matters, and implementing the DTMPP
- Establishing and maintaining a DESCOM TMDE Project Management Office (DTPMO)
- Designating a DESCOM TMDE Project Officer (DTPO)
- Establishing and maintaining a DESCOM TMDE Management Group (DTMG)

- Assigning, monitoring, and evaluating TMDE tasks, including studies and surveys as required
- Maintaining a computer data base of DESCOM reportable TMDE
- Planning, programming, and budgeting for replacement of TMDE in coordination with the DESCOM Comptroller and DARCOM Materiel Readiness Commands
- Publishing authorized DESCOM PIL
- Approving depot support program (TMDE) requirements
- Approving TMDE support system cost savings goals
- Periodically reviewing calibration and maintenance support (in coordination with the Quality Assurance Directorate) to ensure it is consistent with depot mission requirements
- Implementing TMDE support system cost accounting procedures
- Planning and coordinating the implementation of DESCOM ATE objectives
- Planning and coordinating the implementation of Education and Training Programs

n.2 The Depot Commander of each depot will appoint a Directorate responsible for the following activities:

- Serving as the central depot action office for the Depot TMDE Management Program and implementation of the DTMPP
- Developing a local TMDE regulation that consolidates and implements the policies and procedures required to manage TMDE
- Establishing and maintaining a Depot TMDE Project Management Office (DPTPMO)
- Designating a Depot TMDE Project Officer (DPTPO)
- Establishing and maintaining a Depot TMDE Management Group (DPTMG)
- Providing an on-call member to the DESCOM TMDE Management Group; this member will normally be the chairman of the Depot TMDE Management Group
- Assigning, monitoring, and evaluating TMDE tasks, including studies and surveys as required
- Implementing a TMDE management assessment program
- Approving TMDE authorizations and TDA changes
- Approving of the disposal of obsolete and excess TMDE
- Approving requests for acquisition of TMDE
- Approving and forwarding depot support program (TMDE) requirements in accordance with DESCOM policy
- Approving and forwarding depot requirements for TMDE replacement

- Approving and implementing procedures for meeting cost savings goals
- Coordinating, prior to acceptance of new or nonstandard TMDE, with the responsible TMDE support activity to ensure that the calibration, repair, and supply support capabilities are currently available
- Approving repair of nonpreferred TMDE
- Providing input to the ATE planning process as required
- Providing TMDE education and training requirements

Page 2-1. Add Sections VIII, IX, X, XI

Section VIII. DESCOM TMDE Management Group (DTMG)

2-19. Purpose. The purpose of the DTMG is to continually review and assess DESCOM policies and procedures for the acquisition and utilization of TMDE in support of Army materiel.

2-20. Membership. Group Members will consist of a principal and alternate representative from each of the following staff sections:

- Directorate for Management Information Systems
- Directorate for Depot Operations
- Comptroller Directorate
- Quality Assurance Office

2-21. Meetings and Reports. Group meetings will be held quarterly, with additional meetings scheduled as required. The chairman will provide a written report of each meeting to the Director of Depot Operations; the report will be included in the DESCOM quarterly TMDE Activities Report.

2-22. Responsibilities. The DESCOM TMDE Management Group is responsible for the following activities:

- Monitoring and coordinating the centralized management of the DESCOM TMDE Management Program and implementing the DTMPP
- Planning, reviewing, and recommending to the Director of Depot Operations the policy and procedures for the control of TMDE proliferation and the modernization and standardization of TMDE at the depots
- Reviewing the overall DA TMDE Program, coordinating the DESCOM Program with DA and DARCOM, and monitoring the implementation and effectiveness of the DA TMDE Program within DESCOM
- Assigning, monitoring, and evaluting TMDE tasks, including studies and surveys as required
- Providing overall assistance for the DESCOM TMDE Program by monitoring the program effectiveness at the depots
- Approving new or revised TMDE management procedures

- Determining TMDE performance assessment requirements
- Developing DESCOM TMDE Five-Year Management Program Plan format and compiling and submitting quarterly TMDE activity reports to DARCOM
- Planning, coordinating, and establishing a TMDE management assessment program
- Advising and assisting in determining TMDE characteristics, standardization, and logistics support capabilities prior to including the TMDE in equipment authorization or acquisition documents
- Reviewing TMDE requirements and advising if TMDE recommended for acquisition can or cannot be satisfied by TMDE on the DESCOM PIL
- Identifying the commonality of TMDE types and designating the preferred item to be included in future authorization (i.e., TDA) and acquisition documents
- Establishing, monitoring, and controlling the procedures for the DESCOM PIL to ensure that the TMDE reflects the latest state of the art; in the selection of a new PIL item, ensuring that supportability documentation is available and initiating action for inclusion of the item in the DA PIL
- Reviewing and approving all recommendations for nonpreferred TMDE to be classified as mission essential
- Approving new DESCOM PIL TMDE
- Reviewing and consolidating TCRs and engineering aids
- Developing budgeting criteria for TMDE
- Determining TMDE support system cost savings goals
- Developing criteria for cost accounting

Section IX - DEPOT TMDE MANAGEMENT GROUP (DPTMG)

2-23. Purpose. The purpose of the DPTMG is to study, review, and resolve depot TMDE problems and to provide a focal point for these problems.

2-24. Membership. Group members should represent the following staff sections:

- Directorate for Maintenance
- Directorate for Management Information Systems
- Directorate for Administration and Services
- Comptroller Directorate
- Directorate for Supply
- Directorate for Quality Assurance

2-25. Meetings and Reports. Group meetings will be scheduled and conducted quarterly. A report of these meetings will be forwarded to DESCOM headquarters.

2-26. Responsibilities. The Depot TMDE Management Group is responsible for the following activities:

- Monitoring and coordinating the Depot TMDE Management Program and implementing the DTMPP
- Reviewing and approving all TMDE authorizations to ensure that the intended use is consistent with assigned depot missions; reviewing depot TDA to ensure only PIL TMDE are authorized
- Monitoring and coordinating TMDE tasks, including studies and surveys as required
- Monitoring TMDE program effectiveness at depot
- Compiling and submitting quarterly TMDE activities reports to DTMG for inclusion in DESCOM TMDE Five-Year Management Program Plan
- Recommending procedures for obtaining support for non-supportable TMDE
- Reviewing DA Forms 4062-R and 4062-1-R
- Reviewing TMDE requirements and advising if TMDE proposed for acquisition can or cannot be satisfied by TMDE identified on the DESCOM PIL
- Identifying commonality of TMDE types and designating the preferred item to be included in future equipment authorization and acquisition documents
- Approving and forwarding depot-recommended TMDE candidates for DESCOM PIL
- Determining and justifying, to the DESCOM TMDE Management Group, those nonpreferred TMDE that should be classified as mission essential
- Reviewing and approving DESCOM TMDE Cross-Reference (TCR) list submissions and updates
- Reviewing depot requirements for TMDE replacement
- Developing depot procedures for meeting cost savings goals
- Reviewing and approving modifications to the depot TMDE support system

Section X - DESCOM TMDE PROJECT OFFICER (DTPO)

2-27. The DESCOM TMDE Project Officer is responsible for:

- Serving as the DESCOM principal member to the DARCOM TMDE Coordination Group as required

- Serving as the chairperson of the DESCOM TMDE Management Group (DTMG)
- Monitoring and coordinating TMDE management within the assigned area of responsibility and implementing the DTMPP
- Coordinating with DARCOM Materiel Readiness Commands to provide logistics support as required
- Providing necessary assistance to Army Project/Product Managers (in coordination with the DESCOM/Depot ILS Officers) to identify the needs for TMDE concurrently with the development of equipment authorization and acquisition documents in accordance with AR 700-127
- Reviewing and verifying TMDE authorization to ensure that the intended use is consistent with the assigned depot mission
- Monitoring and coordinating TMDE tasks, including studies and surveys
- Recommending new or revised procedures to the DESCOM TMDE Management Group
- Scheduling and conducting an annual DESCOM TMDE conference
- Assisting and advising the depots in the preparation and maintenance of TMDE inventory and asset visibility reporting
- Assisting the depots in identifying, reporting, and disposing of obsolete or excess TMDE
- Maintaining accurate records of nonsupportable TMDE and assisting as required in obtaining necessary support
- Updating DESCOM central TMDE data file
- Reviewing, approving, and forwarding DA Forms 4062-R and 4062-1-R in accordance with AR 750-43
- Publishing and distributing a DESCOM TMDE Cross-Reference (TCR) list and engineering aids
- Assisting the DESCOM TMDE Management Group in the selection of preferred TMDE to meet the needs of the depots
- Reviewing depot support program (TMDE) requirements
- Ensuring that TMDE requirements are budgeted and funded
- Monitoring depot cost savings activities
- Consolidating, analyzing, and distributing TMDE support system cost accounting data
- Assisting DPTPOs, as required, in obtaining TMDE calibration and maintenance services
- Maintaining liaison with the Army Metrology and Calibration Center
- Assigning DESCOM MCN to each make/model of reportable DESCOM TMDE not having an assigned National Stock Number (NSN)

Section XI - DEPOT TMDE PROJECT OFFICER (DPTPO)

2-28. The Depot TMDE Project Officer is responsible for:

- Serving as a member of the DESCOM TMDE Management Group
- Serving as the chairperson of the Depot TMDE Management Group
- Monitoring and coordinating TMDE management within his area of responsibility and implementing the DTMPP
- Reviewing TMDE authorizations and TDA changes approved by the DPTMG
- Monitoring and coordinating TMDE tasks, including studies and surveys
- Coordinating new or revised procedures concerning the management of TMDE with the Depot TMDE Management Group
- Assisting DTPO in providing interface with Army Project/Product Managers on matters relating to TMDE
- Ensuring all depot reportable TMDE have been reported to the DTPO
- Identifying and reporting obsolete and excess TMDE
- Maintaining records of nonsupportable TMDE and reporting these items to the Depot TMDE Management Group
- Reviewing and approving DA Forms 4062-R and 4062-1-R
- Assisting the Depot TMDE Management Group in the selection of preferred TMDE to fulfill the depot needs
- Preparing semiannual updates to the DESCOM TMDE Cross-Reference (TCR) list and engineering aids
- Determining depot support program (TMDE) requirements
- Forecasting depot requirements for TMDE replacement
- Monitoring and reporting cost savings
- Coordinating (with the Calibration Coordinator) TMDE calibration, maintenance, and supply requirements with supporting maintenance and calibration facilities
- Recommending modifications to the TMDE support system

Page 3-1, paragraph 3-3, Procedures. Add subparagraphs e, f, and g following subparagraph d.

e. Disposal of excess TMDE. Excess TMDE will be reported in accordance with DARCOM-R 755-9. One copy of the report will be provided to DSDRS-P.

Upon receipt of turn-in documents, action will be initiated to adjust the depot TDA. The turn-in document and this regulation will serve as authority for not having a TDA TMDE item on hand or on requisition, pending receipt of a new or adjusted TDA.

The listing of an item of TMDE in a technical publication in support of a particular end item or on the depot's TDA document is not a basis for retention of TMDE. All items of TMDE must be screened continually by individual lines and quantities of each separate line to determine whether they are excess to the depot mission. Excess TMDE can generally be categorized as:

- Excess to the maintenance/test authorizations
- Excess because there is no identified functional requirement
- Excess because there is duplication of on-hand TMDE assets

f. Acquisition of DESCOM PIL and non-PIL TMDE

Both DESCOM PIL and non-PIL TMDE will be acquired as follows:

(1) TMDE categorized as PA, PB, PC, and PD will be acquired in accordance with Appendix D. (See paragraph 1-5y for an explanation of codes)

(2) Items categorized as AH in accordance with Chapter 3 of AR 750-43 are exempt from these procedures.

(3) Items categorized as NC or SP are to be acquired in accordance with existing procedures.

(4) All other items that qualify as reportable TMDE will be acquired in accordance with Appendix D.

g. Repair of unserviceable DESCOM TMDE

Procedures for repairing unserviceable DESCOM TMDE follow:

(1) For unserviceable preferred items of TMDE, it will be determined whether repair can be expected within 90 days. If it cannot, command assistance will be requested. TMDE coded PA, PB, PC, PD, and PP qualify as preferred items. TMDE coded AH, NC, and SP are treated in accordance with the priority established on the DA Form 2407 and the repair/washout criteria contained in TB 750-25 and TB 750-91-27.

(2) Repair of nonpreferred TMDE will be limited to essential requirements. Procuring preferred TMDE may be more economical than repairing nonpreferred TMDE. Repair action requiring the replacement of a repair part will not be initiated for non-PIL TMDE (except those coded "PP") with a density of less than 10 within the depot concerned. Exceptions to this policy may be requested through channels. The Depot Commander has approval authority.

(3) For mission-essential nonpreferred TMDE (density greater than 10), it will be determined if repair can be expected within 90 days. If it cannot, the nonpreferred TMDE will be identified as unserviceable/excess, and action will be taken to initiate replacement with a preferred item of TMDE.

DESCOM Suppl 1 to AR 750-43

Page 4-0, paragraph 4-1, General. Add subparagraph c after subparagraph b.

c. As directed by DESCOM, each depot and/or depot activity will prepare a quarterly status report that describes the status for each designated task in the DARCOM TMDE Five-Year Program Plan (FYPP). (RCS AMCMA-151 applies.)

(1) The report format and contents are described in DARCOM supplement 1 to AR 750-43.

(2) Report due date: five working days after the end of the quarter.

Add the following chapter.

CHAPTER FIVE

DESCOM TMDE MANAGEMENT PROGRAM PLAN (DTMPP)

5-1. General

This chapter establishes the requirement for a semiannual review and revision (as required) of the DTMPP. This review will take place during the second and fourth fiscal quarters.

5-2. Program Plan

a. The DTMPP is a plan of action for accomplishment of the objectives established in paragraph 1-3.

b. The plan consists of interrelated activities in a series of functional areas that are correlated to the objectives. Each activity may be subdivided into tasks or subtasks to accomplish the objectives.

5-3. DESCOM TMDE Reports

a. Purpose. The purpose of the DTMPP reports described in succeeding paragraphs is to provide information to the responsible TMDE project offices and groups and to provide TMDE data as required to higher headquarters. Further, the data will be used in the development of economic analyses.

b. DESCOM TMDE Assets (RCS). This report provides asset visibility and is updated continually.

c. Calibration and Maintenance Cost (RCS). This report provides TMDE support system cost data and is updated quarterly. The report data are compiled on ADP media and provided to DESCOM within 15 days after the end of the quarter.

d. DESCOM TMDE Five-Year Management Program Plan (RCS AMCMA-151) The DESCOM TMDE Five-Year Management Program Plan provides a method for reporting to the DARCOM FYPP and for reporting the status of DESCOM unique TMDE tasks. This report is due into DESCOM within five working days after the end of the quarter.

e. TMDE Support Cost (RCS). Data inputs for this report are compiled semiannually and are due into DESCOM fifteen calendar days after the end of the second and fourth fiscal quarters. The report documents TMDE cost savings as a result of DTMPP activities.

APPENDIX D

ACQUISITION OF TMDE

D-1. Purpose. This appendix establishes procedures for obtaining approval to procure TMDE.

D-2. Policy. The individuals listed in paragraph 1-2e are responsible for:

- Initiating and processing DA Forms 4062-R and 4062-1-R as required
- Providing a copy of the DA and DESCOM PIL and this regulation to contracting agencies (civilian and military) and directing their attention to DA Pamphlets 700-20 and 700-21. The DESCOM PIL will have preference.

D-3. Procedure. This paragraph describes the procedure by which new TMDE can be expeditiously acquired. The acquisition procedure is constrained by the policy to procure only TMDE that is on the DESCOM PIL. To obtain a new TMDE that is not on the DESCOM PIL, it is necessary to establish the new TMDE as a DESCOM PIL item before it can be acquired and added to the inventory. Figure D-1 shows the procedural flow required for the acquisition of TMDE. The narrative supporting the figure is as follows:

- Identify TMDE requirements (accomplished by the Depot TMDE Management Group).
- Research DESCOM PIL to determine if the new TMDE is a DESCOM preferred item.
- If it is a DESCOM PIL item, obtain DESCOM approval and funds and acquire the item.
- If it is not a DESCOM PIL item, the following procedures* must be followed:
  - Research DA PIL to determine if it is listed. If it is not listed in the DA PIL, research the DA TMDE Register. If it is not listed on this register, research the commercial market for an item that will meet the requirements using the PIL selection criteria covered in Appendix E. Select an off-the-shelf item of test equipment, complete DA Form 4062-R, and determine the supportability of the selected item. If the item cannot be supported, it is rejected.
  - If the item is listed in the DA PIL or in the DA TMDE Register, its supportability must be determined. If it cannot be supported, the item is rejected.

---

*Consideration should be given to leasing TMDE as opposed to buying TMDE to meet specific short-term requirements. If a decision is made to lease an instrument to meet the test/measurement requirements, the acquisition process is the same as for a DESCOM PIL TMDE. TMDE for short-term requirements might also be borrowed from the NICP.

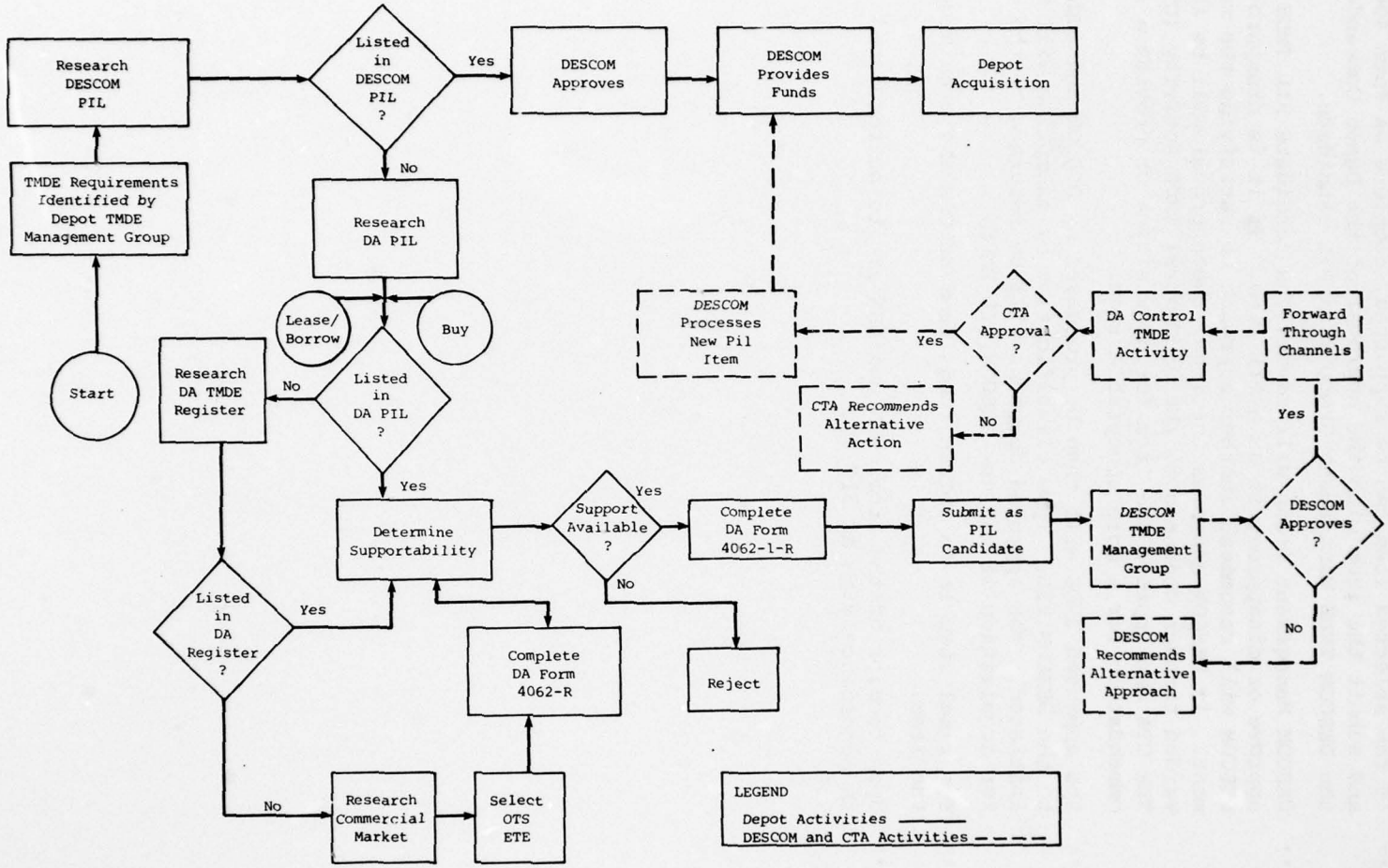

Figure D-1. PROCESSING REQUEST FOR ACQUISITION OF TMDE

- If the selected item can be supported, complete DA Form 4062-1-R and submit the item with the approval of the Depot Commander to the DESCOM TMDE Management Group as a PIL candidate.
- DESCOM Management Group will review the candidate PIL TMDE and approve or disapprove it as a PIL item. If it is disapproved, DESCOM will recommend another approach to satisfying the requirement. If DESCOM approves the item, the approval will be forwarded through channels to the DA Central TMDE Activity (CTA). The CTA can approve the item for acquisition or provide a recommendation for a more acceptable item.
- The approved TMDE will then be processed by DESCOM and added to the DESCOM PIL. Type classification or exemption will be initiated. The approved document will be returned to the depot for acquisition of the new DESCOM PIL TMDE.
- The final step is to obtain funds from DESCOM and then acquire the item.
- Upon receipt of the item, LIN and NSN are to be requested in accordance with AR 310-49.

APPENDIX E

PIL SELECTION CRITERIA

To maintain the DESCOM PIL at some manageable number of TMDE and to ensure that PIL items are in fact the best available to support the DESCOM mission, a "PIL Selection Criterion" is necessary. The selection criterion establishes the minimum acceptable characteristics that the PIL candidate TMDE must have to be selected for the DESCOM PIL. These characteristics are discussed below:

- Mission Essential. The PIL candidate must be able to perform a TMDE mission that is required by depots in support of U.S. Army materiel and that cannot be performed by an existing PIL item. It must also have potential application for existing or anticipated new systems that will be supported by the depot. Replacement of an existing PIL item is another consideration.
- Obtainable. The candidate must be obtainable on the commercial market or readily available in the military system. "Readily available" is defined as deliverable within 90 days after the requirement has been validated and the item requisitioned. For the commercial market, the date the item was first marketed and the date the manufacturer plans to phase out or change the model number are important. As a general rule, if the item is going to be phased out or a model change is anticipated, the item should not be added to the PIL.
- Supportable. The item must be supportable within the existing depot repair and calibration support systems; that is, the supporting technical document must include:
  - Maintenance procedures (theory, troubleshooting, alignment procedures, schematics)
  - Calibration procedures
  - Repair Parts List
- The maintenance and calibration procedures and the repair parts lists must be usable by depot technicians and supply personnel. Acquisition of minor hardware accessories in support of the maintenance and calibration of an item should not affect the determination of the item's supportability.
- State of the Art. The PIL candidate must reasonably reflect the current state of the art for that type of TMDE.
- Manufacturer Support. The manufacturer must be willing to provide logistic support for the PIL candidate. This includes maintenance and calibration, repair parts, and training. Most TMDE manufacturers will make available video tapes on the operation, calibration, and maintenance of their equipment.

FOR THE COMMANDER:

OFFICIAL: Chief of Staff

Adjutant

DISTRIBUTION:

APPENDIX C

DESCOM AND DEPOT PERSONNEL INTERVIEWED

This appendix lists the names, organizations and codes, and offices of the personnel contacted at Headquarters DESCOM and the four designated depots.

Organization, Name and Office	Office Code
USA Depot System Command **Chambersburg, Pennsylvania 17101**	
Mr. C.S. Plasterer, Industrial Engineering Division	DRSDS-PMI
Tobyhanna Army Depot **Tobyhanna, Pennsylvania 18466**	
Col. R. Toole, Commander	SDSTO-C
Mr. J. Umbriac, Contracting Officer	SDSTO-AP
Mr. B. Morris, Deputy Director of Maintenance	SDSTO-M
Mr. J. Frace, Director, Staff Office	SDSTO-M
Mr. J. Gilhooley, Production Engineering Division (COR)	SDSTO-ME-O
Mr. J. Kaczmarek, Production Engineering Division (Alternate COR)	SDSTO-ME-O
Ms. J. Kenger, Procurement Division	SDSTO-AP
Mr. R. Marmo, Operations Branch, Engineering Division	SDSTO-ME
Second Lt. H. Marrangoni, Equipment Management Division	SDSTO-AE
Mr. E. Serafin, Equipment Management Division	SDSTO-AE
Mr. J. May, Calibration Manager	SDSTO-QT
Mr. R. Occulto, Production Engineering Division (Alternate COR)	SDSTO-ME-O
Letterkenny Army Depot **Chambersburg, Pennsylvania 17101**	
Mr. H. Wiesman, Production Engineering Division	SDSLE-MM
Mr. S. Fritz, TDA Coordinator	SDSLE-SE-P
Mr. C. McElwain, Property Book Officer	SDSLE-SE-P
New Cumberland Army Depot **New Cumberland, Pennsylvania 17070**	
Mr. M. Pickel, Production Engineering Division	SDSNC-MP-E
Mr. R. Burkett, Equipment Maintenance Division	SDSNC-SM-CRS
Mr. J. Louque, Production Engineering Division	SDSNC-MP-E
Anniston Army Depot **Anniston, Alabama 36201**	
Mr. J. Giles, Chief, Equipment Management Branch	SDSAN-DS-EM
Mr. K. Reid, Chief, Production Engineering Branch	SDSAN-DM-PP
Mr. B. Rossnagel, Production Engineering Branch	SDSAN-DM-PP
Mr. R. Adams, Calibration Coordinator	SDSAN-DQ-QC

APPENDIX D

LIST OF DOCUMENTS REVIEWED

This appendix lists all the documents reviewed by ARINC Research during the course of this study. It also includes the documents received from the following Army depots: Tobyhanna, New Cumberland, Letterkenny, Anniston, Seneca, Sierra, Tooele, Sacramento, and Corpus Christi.

DEPARTMENT OF THE ARMY

AR 11-11, "The Cost Analysis Program", 10 October 1975.

AR 11-28, "Economic Analysis and Program Evaluation for Resource Management", 2 December 1975.

AR 71-6, "Type Classification/Reclassification of Army Materiel", 1 September 1973.

AR 310-2, "Identification and Distribution of DA Publications and Issues of Agency and Command Administrative Publications", 12 July 1976.

AR 310-3, "Preparation, Coordination and Approval of Department of the Army Publications", 28 December 1968.

AR 310-34 "Equipment Authorization Policies and Criteria, and Common Tables of Allowances", 15 November 1976.

AR 310-49, "The Army Authorization Documents System (TAADS)", 10 June 1975.

AR 700-127, "Integrated Logistics Support", 11 April 1975.

AR 750-25, "Army Metrology and Calibration System", 25 June 1971.

AR 750-43, "Test, Measurement, and Diagnostic Equipment (TMDE)", 24 July 1975, with Change 1, 22 September 1976.

DA PAM 700-20, "The Army Test, Measurement, and Diagnostic Equipment Register", 30 June 1976 (microfiche only).

DA PAM 700-21, "The Army Test, Measurement, and Diagnostic Equipment Register Index and Instructions", June 1976.

TM 38-750, "The Army Maintenance Management System (TAMMS)", 21 November 1972.

TM 38-750-1, "The Army Maintenance Management System (TAMMS) Field Command Procedures", 21 November 1972.

TM 38-750-2, "The Army Maintenance Management System (TAMMS) National Agency Procedures", 21 November 1972.

TB 43-180, "Calibration Requirements for the Maintenance of Army Materiel", 15 December 1975.

TB 750-25, "Maintenance of Supplies and Equipment: Army Metrology and Calibration System", 27 August 1971.

TB 750-91-27, "Maintenance Expenditure Limits", 2 September 1971.

SB 700-20, "Army Adopted/Other Items Selected for Authorization/List of Reportable Items", 20 December 1973.

DA TMDE FYPP, "Department of the Army TMDE Five Year Program Plan, FY76-FY80".

DARCOM

AMCR 750-2, "Maintenance of Supplies and Equipment: Depot Maintenance Plant Equipment Program", 15 January 1976.

DARCOM-R-750-28 , "Maintenance of Supplies and Equipment: Depot Maintenance Program Scheduling, Workloading, and Reporting System", 23 June 1976.

DARCOM Suppl 1 to AR 750-43, "Test, Measurement, and Diagnostic Equipment (TMDE)", 18 February 1976.

DARCOM TMDE FYPP, "U.S. Army Materiel Development Readiness Command TMDE Five Year Program Plan, FY77-FY81".

DARCOM Letter, Subject: "Depot System Command (DESCOM) Relationship with Headquarters DARCOM Functional Managers", dated 25 March 1975.

DARCOM-R-750-2, "Draft, Depot Maintenance Plant Equipment Program", undated.

DARCOM CIRCULAR No. 715-7-77, "Procurement Instruction", 20 April 1977.

DESCOM

DESCOM Briefing Handout, "Overview of the Depot Maintenance Plant Equipment (DMPE) Program within the DARCOM Community", undated.

USA Depot System Command Staff Directory, 3 April 1977.

TOBYHANNA ARMY DEPOT (TOAD)

TOAD Regulation No. 5-4, "Management, Quick Return on Investment Program (QRIP)", 10 May 1976.

TOAD Regulation No. 700-6, "Logistics, Installation Equipment Management", 18 January 1978.

TOAD Regulation No. 700-7, "Logistics, Management of Installation Equipment", 13 March 1973.

TOAD Regulation No. 735-1, "Property Accountability, Inventory of Installation Property Book Items", 16 February 1978.

TOAD Regulation No. 735-10, "Property Accountability, Customer Owned Project Equipment", 13 January 1978.

TOAD Maintenance Directorate Standard Procedure (MD-7), "Procurement of Depot Maintenance Plant Equipment (DMPE) and Requesting Loan of Equipment", 20 June 1977.

TOAD Five Year Maintenance Modernization Plan, "DMPE Acquisition and Replacement Program FY79", undated. Only section VIII, pages 50-71, was provided.

TOAD Item Authorization Worksheet (AMXTO Form 316 (Test)).

TOAD Flow Chart "Authorization and Financing of TDA Tools and Equipment", undated.

TOAD Source Document Flow Chart, undated.

Mission of the Maintenance Directorate, Tobyhanna Army Depot, undated.

TOAD Staff Directory, 22 April 1977.

NEW CUMBERLAND ARMY DEPOT (NCAD)

NCADR 10-2, "Directorate for Maintenance - Mission", 1 February 1977.

NCADR 750-11, "Maintenance of Supplies and Equipment, Depot Maintenance Plant Equipment Program", 1 December 1976.

New Cumberland Army Depot, "Directorate for Maintenance Five Year Modernization Plan", 16 December 1977.

New Cumberland Army Depot ltr SDSNCOMC-E, Subject: DMPE Source Document Flowchart, 1 May 1978.

NCAD Capability/Engineering File Listing as of 9 December 1977.

NCAD Installation Equipment Utilization User Listing, 24 January 1978.

NCAD IE Replacement Analysis List - User Mobile for Quarter Ending 21 December 1977.

NCAD, Computer Listing of TMDE Register of Replaced Items, 3 April 1978.

NCAD Computer Listing, TMDE Items $1000 or more, 3 April 1978.

NCAD Computer Listing, TMDE Replacement Candidates, 3 April 1978.

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APPENDIX E

LIST OF TMDE MANAGEMENT RESPONSIBILITIES

This appendix lists the responsibilities assigned to the individuals and groups involved in the management and control of the TMDE program under each of the eight functional areas of the DTMPP.

PROGRAM MANAGEMENT

- The Director of Depot Operations HQ DESCOM is responsible for the following activities:
  - •• Serving as the central DESCOM action office to develop and coordinate TMDE policy, giving final approval on TMDE matters and implementing the DTMPP
  - •• Establishing and maintaining a DESCOM TMDE Project Management Office (DTPMO)
  - •• Designating a DESCOM TMDE Project Office (DTPO)
  - •• Establishing and maintaining a DESCOM TMDE Management Group (DTMG)
  - •• Assigning, monitoring, and evaluating TMDE tasks, including studies and surveys as required
- The DESCOM TMDE Project Officer is responsible for:
  - •• Serving as the DESCOM principal member to the DARCOM TMDE Coordination Group as required
  - •• Serving as the chairperson of the DESCOM TMDE Management Group (DTMG)
  - •• Monitoring and coordinating TMDE management within the assigned area of responsibility and implementing the DTMPP
  - •• Coordinating with the DARCOM Materiel Readiness Commands to provide logistics support as required
  - •• Providing necessary assistance to Army Project/Product Managers (in coordination with the DESCOM/Depot ILS Officers) to identify the needs for TMDE currently with development of equipment authorization and acquisition documents in accordance with AR 700-127

- •• Reviewing and verifying TMDE authorization to ensure that the intended use is consistent with the assigned depot mission
- •• Monitoring and coordinating TMDE tasks, including studies and surveys
- •• Recommending new or revised procedures to the DESCOM TMDE Management Group
- •• Scheduling and conducting an annual DESCOM TMDE conference

- The DESCOM TMDE Management Group is responsible for the following activities:
  - •• Monitoring and coordinating the centralized management of the DESCOM TMDE Management Program and implementing the DTMPP
  - •• Planning, reviewing, and recommending to the Director of Depot Operations the policy and procedures for the control of TMDE proliferation and the modernization and standardization of TMDE at the depots
  - •• Reviewing the overall DA TMDE Program, coordinating the DESCOM Program with DA and DARCOM, and monitoring the implementation and effectiveness of the DA TMDE Program within DESCOM
  - •• Assigning, monitoring, and evaluating TMDE tasks, including studies and surveys as required
  - •• Providing overall assistance for the DESCOM TMDE Program by monitoring the program effectiveness at the depots
  - •• Approving new or revised TMDE management procedures
  - •• Determining TMDE performance assessment requirements
  - •• Developing DESCOM TMDE Five-Year Management Program Plan format and compiling and submitting quarterly TMDE activity reports to DARCOM
  - •• Planning, coordinating, and establishing a TMDE management assessment program
- The Depot Commander of each depot will appoint a Directorate responsible for the following activities:
  - •• Serving as the central depot action office for the Depot TMDE Management Program and implementation of the DTMPP
  - •• Developing a local TMDE regulation that consolidates and implements the policies and procedures required to manage TMDE
  - •• Establishing and maintaining a Depot TMDE Project Management Office (DPTPMO)
  - •• Designating a Depot TMDE Project Office (DPTPO)
  - •• Establishing and maintaining a Depot TMDE Management Group (DPTMG)

- Providing an on-call member to the DESCOM TMDE Management Group; this member will normally be the chairman of the Depot TMDE Management Group
- Assigning, monitoring, and evaluating TMDE tasks, including studies and surveys as required
- Implementing a TMDE management assessment program
- Approving TMDE authorizations and TDA changes

- The Depot TMDE Project Officer is responsible for:
  - Serving as a member of the DESCOM TMDE Management Group
  - Serving as the chairperson of the Depot TMDE Management Group
  - Monitoring and coordinating TMDE management within his area of responsibility and implementing the DTMPP
  - Reviewing TMDE authorizations and TDA changes approved by the DPTMG
  - Monitoring and coordinating TMDE tasks, including studies and surveys
  - Coordinating new or revised procedures concerning the management of TMDE with the Depot TMDE Management Group
  - Assisting DTPO in providing interface with Army Project/Product Managers on matters relating to TMDE
- The Depot TMDE Management Group is responsible for the following activities:
  - Monitoring and coordinating the Depot TMDE Management Program and implementing the DTMPP
  - Reviewing and approving all TMDE authorizations to ensure that the intended use is consistent with assigned depot missions; reviewing depot TDA to ensure only PIL TMDE are authorized
  - Monitoring and coordinating TMDE tasks, including studies and surveys as required
  - Monitoring TMDE program effectiveness at depot
  - Compiling and submitting quarterly TMDE activities reports to DTMG for inclusion in DESCOM TMDE Five-Year Management Program Plan

ASSETS ACCOUNTABILITY

- The Director of Depot Operations HQ DESCOM is responsible for maintaining a computer data base of DESCOM reportable TMDE.
- The DESCOM TMDE Project Officer is responsible for:
  - Assisting and advising the depots in the preparation and maintenance of TMDE inventory and asset visibility reporting

- •• Assisting the depots in identifying, reporting, and disposing of obsolete or excess TMDE
- •• Maintaining accurate records of nonsupportable TMDE and assisting as required in obtaining necessary support
- •• Updating DESCOM central TMDE data file
- •• Assigning DESCOM MCN to each make/model of reportable DESCOM TMDE not having an assigned National Stock Number (NSN).

- The Depot Commander of each depot will appoint a Directorate responsible for approving of the disposal of obsolete and excess TMDE.
- The Depot TMDE Project Officer is responsible for:
  - •• Ensuring all depot reportable TMDE have been reported to the DTPO
  - •• Identifying and reporting obsolete and excess TMDE
  - •• Maintaining records of nonsupportable TMDE and reporting these items to the Depot TMDE Management Group
- The Depot TMDE Management Group is responsible for recommending procedures for obtaining support for nonsupportable TMDE.

ACQUISITION PROCESS

- The Director of Depot Operations HQ DESCOM is responsible for planning, programming, and budgeting for replacement of TMDE in coordination with the DESCOM Comptroller and DARCOM Materiel Readiness Commands.
- The DESCOM TMDE Project Officer is responsible for reviewing, approving, and forwarding DA Forms 4062-R and 4062-1-R in accordance with AR 750-43.
- The DESCOM TMDE Management Group is responsible for the following activities:
  - •• Advising and assisting in determining TMDE characteristics, standardization, and logistics support capabilities, prior to including the TMDE in equipment authorization or acquisition documents
  - •• Reviewing TMDE requirements and advising if TMDE recommended for acquisition can or cannot be satisfied by TMDE on the DESCOM PIL
- The Depot Commander of each depot will appoint a Directorate responsible for approving requests for acquisition of TMDE.
- The Depot TMDE Project Officer is responsible for reviewing and approving DA Forms 4062-R and 4062-1-R.
- The Depot TMDE Management Group is responsible for the following activities:
  - •• Reviewing DA Forms 4062-R and 4062-1-R

- •• Reviewing TMDE requirements and advising if TMDE proposed for acquisition can or cannot be satisfied by TMDE identified on the DESCOM PIL
- •• Identifying commonality of TMDE types and designating the preferred item to be included in future equipment authorization and acquisition documents

PREFERRED ITEMS LIST (PIL)

- The Director of Depot Operations HQ DESCOM is responsible for the following activities:
  - •• Publishing authorized DESCOM PIL
  - •• Approving depot support program (TMDE) requirements

  The DESCOM TMDE Project Officer is responsible for:
  - •• Publishing and distributing a DESCOM TMDE Cross-Reference (TCR) list and engineering aids
  - •• Assisting the DESCOM TMDE Management Group in the selection of preferred TMDE to meet the needs of the depots
  - •• Reviewing depot support program (TMDE) requirements
- The DESCOM TMDE Management Group is responsible for the following activities:
  - •• Identifying the commonality of TMDE types and designating the preferred item to be included in future authorization (i.e., TDA) and acquisition documents
  - •• Establishing, monitoring, and controlling the procedures for the DESCOM PIL to ensure that the TMDE reflects the latest state of the art; in the selection of a new PIL item, ensuring that supportability documentation is available and initiating action for inclusion of the item in the DA PIL
  - •• Reviewing and approving all recommendations for nonpreferred TMDE to be classified as mission-essential
  - •• Approving new DESCOM PIL TMDE
  - •• Reviewing and consolidating TCRs and engineering aids
- The Depot Commander of each depot will appoint a Directorate responsible for approving and forwarding depot support program (TMDE) requirements in accordance with DESCOM policy.
- The Depot TMDE Project Officer is responsible for:
  - •• Assisting the Depot TMDE Management Group in the selection of preferred TMDE to fulfill the depot needs
  - •• Preparing semiannual updates to the DESCOM TMDE Cross-Reference (TCR) list and engineering aids
  - •• Determining depot support program (TMDE) requirements

- The Depot TMDE Management Group is responsible for the following activities:
  - •• Approving and forwarding depot-recommended TMDE candidates for DESCOM PIL
  - •• Determining and justifying, to the DESCOM TMDE Management Group, those nonpreferred TMDE that should be classified as mission-essential items
  - •• Reviewing and approving DESCOM TMDE Cross-Reference (TCR) list submissions and updates

FUNDING AND BUDGETING

- The Director of Depot Operations HQ DESCOM is responsible for approving TMDE support system cost savings goals.
- The DESCOM TMDE Project Officer is responsible for:
  - •• Ensuring that TMDE requirements are budgeted and funded
  - •• Monitoring depot cost savings activities
- The DESCOM TMDE Management Group is responsible for the following activities:
  - •• Developing budgeting criteria for TMDE
  - •• Determining TMDE support system cost savings goals
- The Depot Commander of each depot will appoint a Directorate responsible for the following activities:
  - •• Approving and forwarding depot requirements for TMDE replacement
  - •• Approving and implementing procedures for meeting cost saving goals
- The Depot TMDE Project Officer is responsible for:
  - •• Forecasting depot requirements for TMDE replacement
  - •• Monitoring and reporting cost savings
- The Depot TMDE Management Group is responsible for the following activities:
  - •• Reviewing depot requirements for TMDE replacement
  - •• Developing depot procedures for meeting cost savings goals

CALIBRATION AND MAINTENANCE

- The Director of Depot Operations HQ DESCOM is responsible for the following activities:
  - •• Periodically reviewing calibration and maintenance support (in coordination with the Quality Assurance Directorate) to ensure it is consistent with depot mission requirements

- •• Implementing TMDE support system cost accounting procedures

- The DESCOM TMDE Project Officer is responsible for:
  - •• Consolidating, analyzing, and distributing TMDE support system cost accounting data
  - •• Assisting DPTPOs, as required, in obtaining TMDE calibration and maintenance services
  - •• Maintaining liaison with the Army Metrology and Calibration Center
- The DESCOM TMDE Management Group is responsible for developing criteria for cost accounting.
- The Depot Commander of each depot will appoint a Directorate responsible for the following activities:
  - •• Coordinating, prior to acceptance of new or nonstandard TMDE, with the responsible TMDE support activity to ensure that the calibration, repair, and supply support capabilities are currently available
  - •• Approving repair of nonpreferred TMDE
- The Depot TMDE Project Officer is responsible for:
  - •• Coordinating (with the Calibration Coordinator) TMDE calibration, maintenance, and supply requirements with supporting maintenance and calibration facilities
  - •• Recommending modifications to the TMDE support system
- The Depot TMDE Management Group is responsible for reviewing and approving modifications to the depot TMDE support system.

ESTABLISH ATE PROGRAM

- The Director of Depot Operations HQ DESCOM is responsible for planning and coordinating the implementation of DESCOM ATE objectives.
- The Depot Commander of each depot will appoint a Directorate responsible for providing input to the ATE planning process as required.

DEVELOP TMDE EDUCATION PROGRAM

- The Director of Depot Operations HQ DESCOM is responsible for planning and coordinating the implementation of Education and Training Programs.
- The Depot Commander of each depot will appoint a Directorate responsible for providing TMDE education and training requirements.