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ASSESSING DEPARTMENT OF DEFENSE  
LOGISTICS SYSTEM CAPABILITY

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## EXECUTIVE SUMMARY

The Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) (ASD(MRA&L)) should be able to evaluate the current capability of the logistics system,<sup>1</sup> determine the capability needed to support the Illustrative Planning Scenario specified in the Defense Guidance (DG), and appraise the programs proposed by the Military Services and Defense Agencies to achieve the needed capability. The ASD(MRA&L) has never been able to make such a comprehensive assessment; the information provided by the Planning, Programming and Budgeting System (PPBS) is inadequate. The Joint Chiefs of Staff (JCS), however, have a Joint Operations Planning System (JOPS) that, with enhancements, could provide the information the ASD(MRA&L) needs.

The information available in the PPBS to assess the capability of the logistics system is incomplete and inconsistent. Materiel requirements to support the Illustrative Planning Scenario in the DG are not completely identified. Movement requirements are based on data inconsistent with materiel requirements and are usually the product of ad hoc studies used to evaluate a single aspect, rather than the total mobility system. Most of the information pertains to funding requirements, without reference to capability requirements and shortfalls. As a result, the ASD(MRA&L) cannot assess the capability of the system as a whole to perform its most important function -- support of U.S. forces at war.

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<sup>1</sup>In broad terms the logistics system encompasses requirements determination, acquisition, storage and outloading of materiel, and the movement of personnel and materiel to overseas theaters. All of these functions involve, to some degree, single manager activities (materiel managers and transportation operating agencies) which support all Military Services.

The JCS have established, under the JOPS, a means to determine the capability of the logistics system to support individual operational plans (OPLANs). Those plans are based on the Joint Strategic Capabilities Plan, which, in turn, is based on the scenarios and priorities set forth in the DG and upon the logistics support expected to result from funding decisions documented in Program Decision Memoranda and the budget.

As presently constituted, the JOPS/OPLAN process stresses reconciliation of movement problems; it does not specifically identify logistics system shortfalls. However, with enhancements, the present process could offer an excellent means to measure the readiness/sustainability of the logistics system. It also could be easily expanded to assess multiple OPLANs. Such an enhanced JOPS/OPLAN system would provide a complete, consistent set of logistics data and reflect the integrated capabilities of the Services, the Defense Logistics Agency and the Transportation Operating Agencies for logistical support of the family of plans equating to the DG planning scenario.

The development of a system to measure logistics system capability based on further refinement of the JOPS/OPLAN process appears feasible and beneficial to the JCS, Services, and Commanders-in-Chief of the unified and specified commands, as well as the ASD(MRA&L). The enhancements can be implemented incrementally, thus quickly improving assessment capability. They also can be made without interfering with the military forces or operations aspects of the OPLAN process.

We recommend that ASD(MRA&L) enlist the cooperation of the JCS in jointly defining and assigning tasks to enhance the JOPS/OPLAN process. The initial tasks should address:

- Development of item requirements and asset data for all classes of supply.

- Expansion of the capability for multi-plan assessment.
- Inclusion of requirements to support the mid-range force structure.
- Specification of measures of logistics system requirements and capability.

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## 1. THE NEED TO ASSESS LOGISTICS SYSTEM CAPABILITY

As principal staff adviser and assistant to the Secretary of Defense for logistics policy and planning, the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) (ASD(MRA&L)) is responsible for ensuring that logistics programs are designed to accommodate operational requirements and promote the readiness, sustainability and efficiency of the U.S. military forces.<sup>1</sup> Much of that responsibility is fulfilled through his participation in the Planning, Programming and Budgeting System (PPBS). Significant roles in this system include participating in the development of the Defense Guidance (DG), reviewing the annual Program Objective Memoranda (POM) submitted by the Services and Defense Agencies, participating on the Defense Resources Board (DRB), and assisting in the preparation of Program Decision Memoranda.

To discharge his responsibilities fully, the ASD(MRA&L) should periodically conduct a comprehensive assessment of the logistics system's capability.<sup>2</sup> Such an assessment should identify the shortfalls (both current and mid-range) of each element of the system, relative criticality of each shortfall, and the resources required to achieve a balanced logistics

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<sup>1</sup>Department of Defense Directive (DoDD) 5124.1, July 26, 1982, Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics).

<sup>2</sup>Logistics system capability is measured in terms of readiness and sustainability. In logistics terms, readiness is the peacetime ability to support the force structure; sustainability is the ability to continue that support, but at combat rates, during hostilities. All resources required to support post D-Day hostilities, except those available from post D-Day production, must be ready (i.e., available) on D-Day. To avoid confusion of terms, we use the more comprehensive term of "capability," which includes both readiness and sustainability.

capability over time. For example, the annual POM process requires the ASD(MRA&L) to evaluate the Military Services' and Defense Agencies' submissions covering all aspects of logistics and to make recommendations regarding the allocation of resources. To do this he should assess the current capability of the logistics system, how it must change to meet the demands of the Illustrative Planning Scenario specified in the DG, and whether the programs proposed by the Military Services and Defense Agencies will achieve the needed capability.

The ASD(MRA&L) cannot now make that kind of assessment. Though he makes many evaluations of the various parts of the logistics system, he has never been able to assess the capability of the system as a whole to perform its primary mission -- support U.S. forces in war. Although the annual POM process is intended to give an overview of the Department of Defense (DoD) Components' plans to meet the DG requirements, the required data do not provide visibility of each of the major elements of the logistics system, the basis for comparing the relative shortfalls of the various elements or the resources required to achieve a given level of balance. The data which address the major elements of the system are frequently inconsistent, incomplete or nonexistent. The POMs do not provide the status of readiness and sustainability of the logistics system. The result is that most analysis is the product of "off-line" data presentation from various sources, with a good chance of noncomparability.

In the next chapter we examine the inadequacies of the present POM data requirements in meeting the needs of the ASD(MRA&L). We then explore the possibility of obtaining the required measures of logistics system capability from data generated by the Joint Operations Planning System (JOPS) maintained

by the Joint Chiefs of Staff (JCS).<sup>3</sup> The JCS now uses JOPS to assess DoD's ability to support specific OPLANS; but, as a participant in the POM review process, it has a similar need to that of the ASD(MRA&L) to perform more comprehensive assessments of logistics system capability.

We conclude with a proposal that not only will provide the ASD(MRA&L) with the information required to fulfill his responsibilities but also will benefit the JCS, Commanders-in-Chief (CINCs), Services and Defense Logistics Agency (DLA).

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<sup>3</sup>The scope of JOPS, which covers all aspects of operational planning, is much broader than the interest of ASD(MRA&L) or the concern of this study. We assume the validity of the forces and military operations aspects of the Operational Plans (OPLANS), e.g., the Commanders' estimates, the concept of operations and the deployment of forces, and are concerned only with those aspects relating to the capability of the logistics system to support the plan. Appendix D provides a more detailed explanation of JOPS which comprehends the OPLAN process.



## 2. PPBS LACKS LOGISTICS SYSTEM CAPABILITY ASSESSMENT

### SUMMARY

Logistics system capability assessment must answer two key questions:

- (1) What are the materiel requirements of war and can they be met? and
- (2) Can the materiel be positioned or moved to where it will be needed?

Responsibility for materiel requirements is shared among the Services and DLA with considerable differences in the techniques used to compute and display their war reserve requirements.<sup>1</sup> These differences, coupled with the lack of uniform item groupings and the absence of meaningful measures, make it impossible to sum or compare the data from the several POMs.

Planning for movement of materiel to meet the DG scenario requirements is the product of ad hoc studies which build movement requirements on a basis of notional data. There is no assurance that these studies have a consistent or timely basis or, since they are based on notional data, that they are consistent with the materiel requirements in the POM.

The greatest obstacle to obtaining evidence of logistics system capability to meet wartime needs is that there is no consistent expression of requirements and capabilities in the POM. Often the only figures given are the dollar value of procurement by fiscal year.

### MATERIEL REQUIREMENTS<sup>2</sup>

Each Service/Agency is responsible for determining and funding its materiel requirements in accordance with the DG. Where a single manager is

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<sup>1</sup>The implementation of Department of Defense Instruction (DoDI) 4140.47, "Secondary Item War Reserve Requirement Development," should result in a more comparable presentation.

<sup>2</sup>Appendix B contains a more detailed description of the materiel requirements determination process.

involved in item management, the responsibility is shared between the single manager and the Services in varying degrees. For conventional ammunition, (Class V)<sup>3</sup> the Services' responsibility is paramount for requirements determination and funding. The ammunition single manager, the Army Armament Materiel Readiness Command (ARRCOM), has only peripheral responsibilities relating to these functions. For Classes VIII (medical materiel) and IX (repair parts and components), DLA is the principal single manager, although some multi-Service use items are managed by a Service. For these classes, the single manager determines DoD-wide peacetime requirements and funds for peacetime inventory level increases and war reserve requirements which are not to be pre-positioned. The single manager/Service interface occurs in all classes with the possible exception of Class VII (major end-items).

In determining the logistics system capability to provide materiel to meet the DG global scenario, consideration must be given to what is required and what is available in terms that give some indication of sustainability. POM submissions include three measures of the capability of the logistics system to provide the level of materiel support specified in the DG. One of the measures is the number of days of supply. Because this measure is an average, the minimum number of days of sustainability is unknown and critical shortfalls are hidden in the average. The other two measures, percentage of requirements achieved and requirements and assets expressed in dollars, reflect the total deficiency in terms of dollars, but hide critical shortfalls and the resources required to achieve a better balance or provide a basis for comparison with the other elements of the logistics system.

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<sup>3</sup>We limited our assessment of materiel requirement measures to three representative classes of supply: Class V, ammunition; Class VIII, medical; and Class IX, repair parts and components. Classes of supply, as distinguished from Federal Supply Classes, are defined in JCS Pub. 1, "Department of Defense Dictionary of Military and Associated Terms." See Appendix A.

Capability information in the POM varies greatly for the classes reviewed.<sup>4</sup> Ammunition data are clearly identifiable in each Service submission. However, there is a substantial difference in the amount of detail provided. The Army submission is the most detailed, with line-item and summary data showing requirements, assets and deficiencies for force "packages" and segments of packages. The Air Force submission is also by line-item, but the detail is limited to gross pre-positioned and total inventory objectives and percentage of achievement of each. The Navy submits the same data, but only in summary form, for ten ammunition categories. The Marine Corps submission consists of summary dollar funding proposals. Finally, a separate submission from the ammunition single manager presents a consolidated production plan.

Medical materiel (Class VIII) consists of equipment items, repair parts and consumables. Except for high-value equipment items, all of these items are stock-funded. The Services compute their war reserve requirements, fund equipment item deficiencies and pre-positioned war reserve deficiencies, and pass to the single manager, DLA, other war reserve requirements for funding. DLA computes peacetime requirements for all Services and funds for any increase in stock fund capitalization to support peacetime and other war reserve requirements. The Services program funds to procure peacetime items from the stock fund through Operations and Maintenance (O&M) appropriations (including low-value equipment items). There is almost no visibility of medical materiel requirements and capabilities in the POM. Funds to support

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<sup>4</sup>Although we will discuss commodities in terms of classes of supply, these classes are not used in the POM process. Instead, broader categories are used which relate to one or more classes, e.g., major items (individually or in groups) and secondary items. For other management purposes the Army has identified all items it uses to a specific class of supply, and the Air Force is in the process of doing this.

peacetime operations and a substantial portion of initial equipment deficiencies are submerged in the O&M submission. War reserve funding for stock fund items, to the extent programmed, appears as a special stock fund augmentation and is not identified to medical materiel. Procurement-funded medical equipment items usually are included only in summary data. When medical materiel is identified, no data are provided that would give an adequate picture of requirements and capabilities.

Class IX consists of repair parts and other consumable items and reparable components. All of these items, except for depot-level reparable, are stock-funded.<sup>5</sup> Class IX items are not specifically identified in the POM, but are grouped with other secondary items, which include most of the items in all classes of supply except V and VII. The basic POM war reserve submission consists of a limited amount of dollar data, summarized by a few broad materiel categories for appropriation-funded items and divided into two manager categories, service or DLA, for stock-funded items. The DLA stock fund data are divided into materiel categories. The data consist of total requirements for pre-positioned and other war reserves, the dollars allocated for funding and the asset position in terms of days of supply (which appears to represent the dollar value attained divided by the value of one day's supply). In support of day-to-day operations these items are managed in commodity groupings and, to some degree, in accordance with weapons system application.

Considerable differences exist in the techniques used by the Services to compute their war reserve requirements. The Army begins with a War Materiel Requirement (WMR), which is reduced by peacetime offsets and divided into

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<sup>5</sup>The Navy is conducting a test to determine the efficacy of managing depot level reparable in stock funds.

Pre-positioned War Reserve Materiel Requirement (PWRMR) and Other War Reserve Materiel Requirement (OWRMR). The other Services do not compute a total WMR. Instead the wartime increments to peacetime requirements for pre-positioned and other war reserve stocks are separately developed. A part of the Navy and Marine Corps war reserve requirement is reflected as peacetime requirements and not separately identified. The implementation of the revised DoDI 4140.47, Secondary Item War Reserve Requirements Development, should result in a more comparable presentation of requirements.

With the responsibility for materiel requirements shared among the Services and DLA, coupled with the lack of uniform item groupings and the absence of meaningful measures, it is not possible to sum the data from several POMs and make meaningful assessments of asset shortfalls or the effect of alternative resource allocations.

#### DISTRIBUTION AND MOVEMENT REQUIREMENTS<sup>6</sup>

Each of the Services and DLA are responsible for determining and funding for their storage and outloading requirements in accordance with the DG. The Transportation Operating Agencies (TOAs) are responsible for Continental United States (CONUS) inland transportation, ports of embarkation and debarkation, and strategic mobility. The TOAs are the Military Transportation Management Command (MTMC), the Military Airlift Command (MAC) and the Military Sealift Command (MSC). Responsibility for funding strategic mobility is divided among the Army for MTMC, the Navy for MSC and the Air Force for MAC. Strategic mobility requirements are based on the movement of units, unit-related supplies, non-unit-related supplies and replacement personnel. In establishing the requirements and capabilities of the TOAs, cognizance must be

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<sup>6</sup>Appendix C contains a more detailed description of the distribution and movement system.

given to their interdependence and to the impact of materiel requirements and availability on the distribution system. The materiel portion of the strategic mobility requirement is determined by the assets available to meet the CINCs' time-phased materiel requirements and the appropriate movement mode (sea or air). The MAC and MSC CONUS terminal arrival date drive the MTMC inland movement requirements which, in turn, determine the outloading requirements.

The storage and outloading funding requirements are reflected under military construction, operations and maintenance, and procurement appropriations. The POM formats do not require the separate identification or display of the storage and outloading requirements. A system to determine the total time-phased outloading requirements by installation does not exist. The CONUS Military Installations Materiel Outloading and Receiving Report, DD form 1726, is intended to provide data on current peacetime and mobilization capability. MTMC is responsible for analyzing the data and for providing analyses and summary data to ASD(MRA&L), JCS, the Services and DLA.

The strategic mobility funding requirements generally are not visible as such in the POMs. In addition to being combined with other requirements for the Army, Navy and Air Force, the requirements are reflected in multiple appropriations and programs. The requirements for strategic mobility are based on intermittent and frequently independent studies. The Strategic Mobility Requirements Program (SMRP-83), completed in 1978, was used for MTMC requirements. The Congressionally Mandated Mobility Study (CMMS), completed in 1981, was used as a basis for MAC requirements. MSC requirements were based on a 1983 Navy study pending the completion of the DoD Sealift Study being conducted by the Office of the Secretary of Defense (OSD) and JCS. The Navy study drew on data contained in the CMMS and DoD Sealift Study. These

studies are based on simulations using notional data which have been found to vary significantly from requirements based on individual item computations. Strategic mobility requirements are also influenced by pre-positioning options.

The data contained in the POMs do not provide visibility of the capability of each of the elements of the distribution system nor the basis for comparing the relative shortfalls of the several nodes. Responsible officials do not have an adequate picture, based on the several POMs, of the status of the readiness and sustainability of the logistics system, the shortfalls, and where and how much resource investment is required to achieve a given level of balance.

#### PLANNED IMPROVEMENT

There are several systems in various stages of development that have an objective of improving logistics system capability assessments. They vary in coverage. The Army Logistics Assessment (ALA) is the most comprehensive. It is designed to determine the capability of 38 processes or activities, including the major logistics system activities. Although designed to support the POM process, ALA bases its assessments on the requirements and capabilities in support of individual OPLANs. ALA has a goal to expand its assessment to a multi-OPLAN mode. Interfaces with single managers are either ignored (in the case of DLA) or covered by an allocation of resources (in the case of the TOAs).

Several models deal with materiel requirements only. The Air Force is developing, and expects to operate this year, a Wartime Assessment and Requirements Simulation model. This model will have capability to compute wartime materiel requirements and allocate resources by priority to multiple OPLANs. DLA is developing and testing a model for allocation of materiel

assets and determination of shortfalls by OPLAN and Service. The model was developed to handle a single OPLAN, but with minor modifications it could operate in a multi-plan mode. ARRCOM has operational the Conventional Ammunition Readiness Evaluation System (CARES) which provides summary evaluation data. CARES has multiple OPLAN capability.

The DD Form 1726 and instructions for reporting storage, receiving and outloading capability, are in process of revision to provide for incremental buildup to mobilization capacity, containerization capability and other improvements. MSC is in process of developing requirements for a revised Strategic Contingency Planning System (SEACOP) system which will improve the comparison of sealift capability to requirements.

All of these efforts reflect the need for more adequate assessment capability. But all of them fall short of the kind of DoD-wide capability assessment needed by ASD(MRA&L). Therefore, we turn to the JOPS/OPLAN process in our search because both the PPBS and JOPS are concerned with the capability of logistics system to support the requirements of the DG.

### 3. JOPS COULD PROVIDE DATA FOR CAPABILITY ASSESSMENT

#### SUMMARY

The JOPS/OPLAN process, including the Military Services and Defense Agencies supporting processes, has the potential for providing the ASD(MRA&L) with the data he needs to make a logistics system capability assessment. JOPS encompasses the development of individual OPLANs by each CINC for assigned missions. Each OPLAN is premised on a force structure dictated by the Joint Strategic Capabilities Plan (JSCP) which, in turn, is based on the DG scenario and priorities. Thus, we have a direct link between the forces allocated to the CINCs and the POM force structure (though the forces allocated and resources available for OPLAN purposes are constrained to those planned under the PPBS for the year preceding the first POM year). Furthermore, JOPS provides, in its Time-Phased Forces Deployment Data (TPFDD) segment, an assessment of logistics system capabilities to meet a specific OPLAN's requirement to move troops and supplies to the combat theater.

Thus, JOPS has many of the features required to provide the data necessary to assess the capability of the DoD logistics system to meet war plans. In its present configuration, however, the process will not meet the requirements of ASD(MRA&L) because of two key deficiencies.

First, the emphasis in the present process is on strategic lift capability and the development of feasible movement tables based in part on notional materiel requirements -- pounds per man per day -- rather than the shortfalls between the requirements of an OPLAN and the capability of the logistics system. Second, the process examines plans individually; this is inadequate for comparing capabilities with the requirements of the global

scenario of the DG. There are initiatives underway which will greatly enhance the assessment capability. These include replacement of notional data with item requirements data and identification of a family of global plans, along with the capability to process multiple plans.

#### PPBS/JOPS RELATIONSHIPS

In part, both the PPBS and JOPS are systems for determining logistics system requirements and capabilities. There is no formal relationship between these two systems, and their major objectives differ. However, the systems share a common base in the DG and many of the participants who are common to both have a common concern -- the capability of the logistics system to support the requirements of the combat forces.

The PPBS translates the force requirements developed by the military into POM and budgetary requirements. It brings fiscal reality to the programming process and resource allocation based on common guidance as to forces, priorities and objectives. JOPS translates threat, tasks and programmed forces into OPLANs. A key process of JOPS is the determination of the adequacy, feasibility and suitability of the plan developed within the resource constraints of the PPBS.

Various elements of OSD, including the ASD(MRA&L), participate in the PPBS process. The CINCs of the unified and specified commands are major participants in the JOPS process. The participants common to both PPBS and JOPS are the JCS, Military Services and DLA.

The common base for POM and OPLAN requirements is a series of linked policy and planning documents. The Joint Strategic Planning Document (JSPD) contains the JCS advice as to what military strategy and force structure are required to attain national security objectives. The JSPD is not fiscally constrained and serves as one input into the DG issued by the Secretary of

Defense (SECDEF). The DG sets forth national priorities, planning scenarios and objectives. It contains the rationale for Defense programs and the total obligational authority for each Service/Agency, and is the basis for preparation of the POMs. The Service/Agency POMs contain the details of the forces, manpower and materiel needed to attain the DG objectives and the proposed programs for resource allocations. The POMs are reviewed by OSD and Office of the Joint Chiefs of Staff (OJCS) to assure they comply with the DG objectives for force structure, modernization, readiness and sustainability. Subsequent to resolution of issues by the DRB, the SECDEF's decisions are published as Program Decision Memoranda and become the basis for the budget and the JSCP. JSCP is the medium used by JCS to provide a statement of strategy and establish tasks for the unified and specified commands. The tasks include those which require OPLANs in accordance with JOPS. JSCP allocates major combat forces and strategic mobility resources. Materiel resources are not allocated.

A major difference between the PPBS and JOPS is the time periods they address. The POMs are directed toward the five-year, mid-range programming period but also show data for prior years. The OPLANs are based on the year prior to the five-year POM period. Also, POMs are global; OPLANs are regional.

#### MATERIEL REQUIREMENTS

The emphasis throughout the JOPS/OPLAN process, from a logistics point of view, is on present strategic lift capability to move currently available assets, rather than on the identification of the shortfalls between the requirements of an OPLAN and the capability of the logistics system. JOPS examines OPLANs individually; however, there is a family of OPLANs which equate to the DG multi-theater scenario.

The basic categorization of materiel requirements for OPLANs is by class of supply. The requirements are initially computed on a notional basis using planning factors provided by the Services. These factors are most commonly stated, by class of supply, in terms of pounds per man per day, with notional depot origins. The notional materiel requirements, expressed in tons, are entered into the TPFDD file and used in the initial OPLAN feasibility determination. As a further step toward achieving a logistically feasible plan, the first TPFDD refinement conference hosted by the Joint Deployment Agency (JDA) replaces the notional data with "sourced" data to the extent available. Sourced data are based on individual item requirement computations, asset availability and actual point-of-origin determinations. This process is performed, to the extent it is accomplished, by the Services and single managers, and the data are summarized into tons by time-phased shipments from actual points of origin. Separate records are generated for shortfall quantities, but are not included in the TPFDD file. To the extent that sourcing is accomplished, the process produces a statement of materiel requirements, capability and shortfall. To the extent that requirements are notional, the actual requirements and capability to meet the plan are unknown.

Efforts are underway to increase the extent to which notional requirements are replaced by sourced requirements in the TPFDD refinement process. Item requirements for Classes I, III and V are now developed by the supporting Services for all OPLANs. Materiel requirements for Class VIII are notionally stated; however, the Services and DLA are in the process of converting these to sourced item requirements. DLA developed a prototype program to enable the sourcing of medical materiel and other DLA-managed items. For Class IX, materiel requirements are notionally stated except for two plans sourced by the Army. The Army plans to compute item requirements for all classes in all

OPLANs. Table 3-1 shows the extent of accomplished and planned sourcing. The increase in the extent of sourcing will improve the assessment of the distribution system capability. However, under the present JOPS system, sourcing does not assist the CINCs in determining the materiel support feasibility of the OPLAN because the shortfalls between materiel requirements and available assets are not reflected in the TPFDD. Further, the regional OPLANs are evaluated individually, and total CONUS assets are applied to each. Thus, the shortfalls under a global scenario are not revealed.

TABLE 3-1. USE OF ACTUAL ITEM OR NOTIONAL DATA IN OPLANS

COMMODITY	CLASS	ARMY	NAVY	AIR FORCE	MARINES
Subsistence	I	1	1	1	1
Individual Equipment	II	1	3	3	3
Petroleum	III (BULK)	1	1	1	1
Petroleum	III (PKG)	1	2	2	2
Construction	IV	1	3	3	3
Ammunition	V	1	1	1	1
Major End-Items	VII	1	3	3*	3
Medical	VIII	1	1	1	1
Parts and Components	IX	1	3	3	3

- 1 - Actual item requirements and capabilities developed. (All Services have sourced Classes I, III and V. All Services are in process of sourcing Class VIII. The Army is in process or plans to source all Classes.)
- 2 - JSCP factors just developed (more reliable).
- 3 - JSCP factors used (notional).
- \* - Except for VIIA (engines and trap).

Apart from the JOPS process, but related to OPLAN capability measurement, the CINCs provide sustainability ratings for the JCS Military Capability Report to the SECDEF. The ratings are limited to theater pre-positioned assets and are expressed as the percentage of assets to requirements. Because the sustainability ratings are averages, they reflect neither the minimum days

of available support nor the extent to which operations could be sustained, considering both theater and CONUS assets.

#### DISTRIBUTION AND MOVEMENT REQUIREMENTS

Distribution requirements are an outgrowth of the materiel requirements determination. It is the intent of the JOPS process to base distribution requirements on those materiel assets available during the planning year. The TPFDD is composed of shipments based on a mixture of available assets, where sourcing has been accomplished, and notional requirements, where sourcing has not been accomplished.

The outloading capability to support the OPLANs is assessed by MTMC based on the DD Form 1726 data which reflect current and mobilization outloading capability of depots and installations. MTMC uses the data as constraints in its model to develop OPLAN movement tables. Output from the model identifies those instances when the outloading capacity of an installation is insufficient to support the OPLAN requirement.

MAC is the first of the TOAs to measure capability against OPLAN personnel and materiel movement requirements subsequent to refinement of the TPFDD. MAC has principal responsibility for the aerial ports of embarkation/debarkation (APOEs/APODs) and the strategic airlift. MAC processes the refined TPFDD movement requirements through its Integrated Military Airlift Planning System (IMAPS). The constraints include ramp space, materiel handling equipment, number of aircraft by type, crews and available hours of the airfield. IMAPS assesses MAC's capability to meet the OPLAN requirements. Output reports identify the degree of shortfall and the constraining factors. Output data are used in other computer programs to provide summary management reports reflecting over time the requirements, capability and the shortfall in tons.

MTMC is responsible for CONUS commercial and military land transportation, and CONUS and overseas common user ocean terminals. After the TPFDD movement requirements are decremented by MAC to reflect the strategic airlift capability, MTMC processes the remaining movement requirements by using the Mobility Analysis and Planning System (MAPS II). The constraints in this model include outloading capability, CONUS rail and motor truck availability, and throughput capacity of the sea ports of embarkation/debarkation (SPOEs/SPODs). Output from the model measures the degree of capability shortfall and identifies the constraining factors.

MSC is the final TOA to participate in developing OPLAN movement tables. MSC is responsible for the ocean transportation element. MSC processes the refined TPFDD movement requirements through the SEACOP model. Constraints include availability of ships, depth of harbor, number of berths, loading/unloading time and ship speed. The model assesses MSC's capability of supporting the OPLAN requirements. Output reports identify the degree of shortfall and the constraining factors. Output data are used in other computer programs to provide summary management reports reflecting the requirements, the capability and the shortfall over time.

#### PLANNED IMPROVEMENTS

It is an objective of JDA to improve OPLAN capability assessment by obtaining sourced data for all classes of supply. In addition to the existing measures of logistics system capability, the JDA has developed specifications for a series of summary management reports that will reflect the requirements and capability of the logistics system.

If implemented, these improvements would enhance the analysis capabilities of the OPLAN process, but they would not provide the full logistics system capability assessment needed by the ASD(MRA&L). However, the OPLAN

process can be enhanced, as outlined in Chapter 4, to provide the data for this assessment without disturbing its intended function. In fact, these enhancements would also benefit JCS, the Services and other DoD components involved in the process.

#### 4. A PROPOSAL TO OBTAIN LOGISTICS SYSTEM ASSESSMENT CAPABILITY

The mechanism of the JOPS/OPLAN process provides an excellent opportunity to obtain a realistic, consistent measure of the requirements and capabilities of the major elements of the DoD logistics system to meet the DG planning scenario. To accomplish this objective a number of enhancements must be completed. These include:

- The development and use of item requirements and asset data for all classes of supply.
- The capability for multi-plan assessment.
- The inclusion of requirements to support the mid-range force structure.
- The coordination of inventory manager and TOA processes in a multi-theater scenario mode.
- The establishment of measures of logistics system requirements and capability.
- The consideration of other requirements not included in OPLANs, such as training and aid to allies.

All of these enhancements are feasible. The first two and the fourth are under development and partially achieved today. The mid-range force structure exists in the POM, but provisions are required to process it through the JOPS. Provisions are also needed to add other POM requirements such as training and aid to allies. The area requiring the greatest development is the establishment of measures of logistics system requirements and capability. These measures must provide summary data which can be used as a basis for comparing current capability and proposed programs with the requirements and objectives of the DG. For each major element of the logistics system they should facilitate the determination of the relative criticality of the shortfalls and the assessment of alternative resource allocations to achieve a balanced logistics capability. Needed is a coordinated plan of specific actions to complete the

development and implementation of the enhancements to assure that the objective will be achieved. This approach of expanding on the existing JOPS/OPLAN process and related Military Service and Defense Agency unique processes will minimize the time and effort necessary to provide the required measures.

An incremental approach to the ultimate objective will quickly produce a usable assessment capability that will improve over time. It could begin with an assessment of current capabilities which could be used for program evaluation and allocation in the budget year. Later the assessment could be extended to the mid-range period. Another dimension to the incremental approach would begin with the assessment of capabilities against one or two major OPLANs. This also could expand to a multi-plan assessment and the ultimate inclusion of training and aid to allies.

The enhancement of the OPLAN process would provide improved analysis capability to all present participants in the process (JCS, the CINCs, Military Services, DLA, the TOAs), and it would give to the ASD(MRA&L) a much needed capability to assess the DoD logistics system on a DoD-wide basis. All of this can be accomplished without disturbing the important functions of the process as an operational planning tool.

Since the OPLAN process is an integral part of the JCS JOPS, it is essential that the enhancement of the process be undertaken with the full participation and sponsorship of JCS.

#### RECOMMENDATION

To provide the ASD(MRA&L) with the comprehensive logistics system assessment capability he needs to fully discharge his responsibilities, we recommend that MRA&L enlist the cooperation of the JCS in jointly defining and assigning tasks to enhance the JOPS/OPLAN process to provide data for short and mid-term readiness and sustainability assessments.

APPENDIX A  
CLASSES OF SUPPLY<sup>1</sup>

SUPPLIES

All items necessary for the equipment, maintenance and operation of a military command, including food, clothing, equipment, arms, ammunition, fuel, materials and machinery of all kinds. For planning and administrative purposes supplies are divided as noted below. The subclassification materiel designators (A through T) may be used in combination with the designated subclassifications to further define a portion of a class of supply for planning purposes, e.g., use of Class V AL to designate ammunition, air missile. Additional codes may be utilized by the Services to satisfy a specific requirement. This additional permissive coding is not to be utilized in lieu of that designated for the major classification and subclassification.

Class I

Subsistence, including gratuitous health and welfare items. Subclassifications for Class I are: A -- Air (inflight rations); R -- Refrigerated subsistence; S -- Nonrefrigerated subsistence (less combat rations); C -- Combat rations (including gratuitous health and welfare items).

Class II

Clothing, individual equipment, tentage, organizational tool sets and tool kits, hand tools, administrative, and housekeeping supplies and equipment. Subclassifications for Class II are: B -- Ground support materiel (includes power generators and construction, barrier, bridging, fire fighting, petroleum and mapping equipment); E -- General supplies; F -- Clothing and textiles; M -- Weapons; and T -- Industrial supplies (includes bearings, block

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<sup>1</sup>Source: JCS Pub. 1.

and tackle, cable, chain, wire rope, screws, bolts, studs, steel rods, plates and bars).

### Class III

Petroleum, oils, and lubricants. Petroleum fuels, lubricants, hydraulic and insulating oils, preservatives, liquid and compressed gases, bulk chemical products, coolants, deicing and antifreeze compounds, together with components and additives of such products, and coal. Subclassifications for Class III are: A -- Air; and W -- Ground (surface).

### Class IV

Construction. Construction materials to include installed equipment and all fortification/barrier materials. (No subclassifications.)

### Class V

Ammunition. Ammunition of all types (including chemical, biological, radiological and special weapons), bombs, explosives, mines, fuzes, detonators, pyrotechnics, missiles, rockets, propellants and other associated items. Subclassifications for Class V are: A -- Air; and W -- Ground.

### Class VI

Personal Demand Items (Nonmilitary Sales Items). (No subclassifications.)

### Class VII

Major End-Items. A final combination of end products which is ready for its intended use; e.g., launchers, tanks, mobile machine shops, vehicles. Subclassifications for Class VII are: A -- Air; B -- Ground support materiel (includes power generators and construction, barrier, bridging, fire fighting, petroleum and mapping equipment); D -- Administrative vehicles (commercial vehicles utilized in administrative motor pools); G -- Electronics; K -- Tactical vehicles; L -- Missiles; M -- Weapons; and N -- Special weapons.

Class VIII

Medical Materiel Including Medical-Peculiar Repair Parts. (No subclassifications.)

Class IX

Repair Parts and components to include kits, assemblies, and sub-assemblies, reparable and nonreparable, required for maintenance support of all equipment. Subclassifications for Class IX are the same as Class VII with addition of T -- Industrial supplies (includes bearings, block and tackle, cable, chain, wire rope, screws, bolts, studs, steel rods, plates and bars).

Class X

Materiel to Support Nonmilitary Programs, e.g., Agricultural and Economic Development, not included in Classes I-IX. (No subclassifications.)



APPENDIX B  
MATERIEL REQUIREMENTS

AMMUNITION

Army POM

The Army Authorized Acquisition Objective (AAO) for ammunition is developed annually by the Army Research Development and Acquisition Information Systems Agency.<sup>1</sup> The primary bases for the computation are the Logistics Structure and Composition System (LOGSACS),<sup>2</sup> which summarizes end of POM period equipment requirements for the force described in the DG; and the Wartime Requirements Study, which is prepared by the Concepts Analysis Agency and provides ammunition consumption rates. Additional input data, such as training and test requirements, assets and undelivered procurement, and program data are obtained from other sources.

The AAO computation, by stock numbered item, is provided to the Materiel Readiness Commands (MRCs) responsible for ammunition management, ARRCOM and the Missile Command. These requirements represent the unconstrained AAO, i.e., the requirement for the total support period authorized in the DG. At the MRCs the data are adjusted to reflect current assets, funding and production capability. These data are obtained from the Army Worldwide Ammunition Reporting System, a quarterly report<sup>3</sup> from all activities and units. Budget analysis worksheets are prepared for each item. At this point the "unconstrained" requirement is constrained to the number of

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<sup>1</sup>A very detailed analysis and critique of this process is contained in "The Total Army Requirements Program - Phase I (TARP-I)," a study prepared by the Concepts Analysis Agency in July 1981.

<sup>2</sup>LOGSACS is a part of the Structure and Composition System (SACS).

<sup>3</sup>Monthly for critical items.

days of ammunition requirements authorized for program consideration in the DG. These requirements are spread over the POM period. The MRC submits the budget analysis worksheets to Army Materiel Development and Readiness Command (DARCOM) where the requirements are further analyzed and reduced to the total obligational authority allocated for ammunition procurements. Final approval of the POM requirements are provided by the Deputy Chief of Staff for Research, Development and Acquisition.

#### Army OPLAN

The ammunition section of the logistics annex to an OPLAN is prepared by the Depot Systems Command (DESCOM) with the assistance of the MRCs and the supporting Army Component Commander.

The computation criteria for ammunition OPLAN requirements (which are called "preplanned" supply requirements) are contained in Appendix 3 to Annex T of the DARCOM Logistics Policy and Procedures for Contingency Planning. The computations are based on weapons density/personnel strength, the time-phased columnar rates for conventional ammunition and bulk allotment items in SB38-26, and specific guidance contained in each supported Army Command OPLAN. Missiles are provided for separately in each supported Army component commander's Logistics Plan.

For all OPLANs, the Class V requirements are computed on an individual item basis and displayed in that format in all iterations of the TPFDD process until they are consolidated and reflected as individual shipment's tonnage requirements in the movement plan.

Conventional ammunition items are sourced by ARRCOM using the Ammunition Distribution System, a locally developed model which considers actual assets by depot location, depot outloading capabilities, inland transportation times, port of embarkation capabilities, ship availability and

transit times. Air transportation capability is provided on a limited basis. Asset information is obtained from the Army Worldwide Ammunition Reporting System.

#### Navy POM

The Navy non-nuclear ammunition POM requirement is developed in a process which involves the Office of the Deputy Chief of Naval Operation (Logistics), the Systems Commands and the Fleet Commanders.

The process begins with the development of monthly consumption requirements for a "worst case" scenario for each of the fleets, which corresponds to the DG scenarios. Consideration is also given to the rapid deployment force. These requirements are further processed to determine the planning objective (the total authorized for planning in the DG) and the program objective (the total authorized for programming in the DG). In addition, a PWRMR and a War Reserve Materiel Requirement (WRMR) are computed for each fleet.

Assets derived from the Conventional Ammunition Inventory Management System (CAIMS) are applied to determine the net deficiencies. CAIMS provides a monthly report of worldwide asset status.

The POM submission contains the planning objective, the program objective and the applicable assets in dollar value summary for ten ammunition categories. Marine Corps air ammunition requirements are included in the totals.

#### Navy OPLAN

As part of the POM requirements process, an allocation of current assets is made to each of the three fleets. This is a simple mathematical percentage which reflects the relationship of each fleet's requirements to the POM total.

Part of this "fair share" represents pre-positioned war reserve assets, and part represents a share of the assets being held in general war reserve stocks by the Navy or for the Navy by the single manager.

The CAIMS process provides a monthly output to each fleet showing, in line-item detail, its allocation of available assets. The Fleet Commander uses this printout as the basis for his OPLAN item requirements. In effect, he puts into the OPLAN a requirement which is equal to his allocated pre-positioned and general war reserve assets.

In the TPFDD process, those assets allocated to the fleet, which are to come from single manager depots, are identified to the single manager for sourcing. Non-single manager assets and items managed by the single manager, but to be supplied from Navy tidewater depots, are not introduced into the TPFDD process for sourcing and movement tables. Marine Corps air ammunition items are handled by the Navy and included in the totals.

#### Marine Corps POM

Marine Corps ammunition rates of consumption have been developed in support of assault and sustaining conditions for both level-of-effort and threat-oriented surface ammunition.

These rates and other data are maintained in the Logistics Management Information System which is made up of many files. The Item Identification file contains ammunition related data, including the consumption rates. The Equipment Allowance file has the densities of weapons by individual or type unit, and the Force Structure file shows the force structure by type of unit by year. The consumption requirements for the post D-Day period plus training requirements for the last year of the POM make up the Inventory Objective. The Acquisition Objective is the portion of this requirement authorized for procurement. A pre-positioned war reserve is

computed separately from the Objectives and represents the portion of currently available assets that are earmarked for pre-positioning.

The Objectives are used in the Materiel Management Programming Model to arrive at deficiencies to the requirements through the POM period. In the model, assets are applied from the Marine Corps Ammunition Reporting System, which consolidates CONUS assets, overseas assets, which are applied manually, and assets due in from procurement in the year of procurement. Training and other losses are projected over the POM period. Percentages of the Objectives on hand and funded for each POM year and a recommended buy quantity for the budget year are the end products of the model. The Marine Corps POM submission consists of summary dollar funding proposals by year.

#### Marine Corps OPLAN

The Marine Corps portion of an OPLAN is the responsibility of the force commander. Periodically, each commander is given a line-item allocation of available assets from which he is expected to identify his requirements for the TPFDD process. Item data given to him are also identified as to specific location, if in Marine Corps hands, or identified as being in single manager inventory. Only the portion in single manager inventory is processed to the single manager for sourcing in the TPFDD process. The force commander has the prerogative to identify to the CINCs requirements that exceed his allocated assets. These, however, do not play in the TPFDD process.

#### Air Force POM

The Air Force POM requirement for ammunition is an output of the Office of Deputy Chief of Staff for Plans and Operations, with heavy participation from the major commands (MAJCOMs). Under the Deputy Director of Plans for Force Development, the Munitions Planning Division runs a series of

computer models which provide an end product of the POM-authorized requirement divided into two elements: the "Pre-positioned Objective" and the "Inventory Objective." These objectives correspond to the DG authorized elements of pre-positioned requirements to support the major scenarios and the residual requirement, which is based on the most demanding scenario. The munitions computation builds on sortie data, the "Mission Area Analysis" and the "Threat Environment Description," as well as other inputs. The data from these inputs are processed through a series of models to compute near-term and end-of-POM-period requirements for each line-item. Asset data are input from the DO-78 program to determine the deficiency, which is programmed manually over the POM period in conformance with the DG.

The Air Force POM submission provides line-item data to reflect dollar value of the pre-positioned objective and the inventory objective; the cumulative buy proposal for each POM year expressed in dollar terms; the percentage of achievement against each objective in each POM year; and the remaining production capability.

#### Air Force OPLAN

The ammunition requirements for each OPLAN are a product of the MAJCOM responsible for the plan. The OPLAN requirements form the basis for the Wartime Consumables Distribution Objectives which reflect the distribution of pre-positioned war reserve requirements by base within each MAJCOM. The basis for the OPLAN computation is substantially the same as the near-term requirement in the POM process, which is determined by the application of an expenditure per sortie factor to ammunition types that are currently available and by the current force structure.<sup>4</sup>

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<sup>4</sup>A difference may arise when the MAJCOM uses sortie rates varying from those which are used in the POM process.

The line-item requirements which are passed to the Air Force Ammunition managers and the Ammunition single manager for sourcing in the TPFDD process consist of shortages to pre-positioned requirements and resupply requirements.

#### Single Manager for Conventional Ammunition POM

The single manager function for conventional ammunition is assigned to the Secretary of the Army by DoDD 5160.55, "Single Manager for Conventional Ammunition," November 17, 1981. Within the Army, the Executive Director for Conventional Ammunition is located in DARCOM headquarters and detailed functions are performed at ARRCOM. The single manager is responsible for management of the production base and wholesale storage and distribution functions. The Services are responsible for requirements determination and funding.

In the POM process, related functions of the single manager and the Services are coordinated through a process which starts early in the requirements and funding development period. This begins at an initial meeting where Service procurement requirements are related to production capability, warm-base considerations and manpower availability. As a result of this and subsequent reviews, the Service POM procurement proposals reflect the resolution of any conflicting requirements and capabilities. The single manager submits a separate integrated POM reflecting the agreed-to production plans.

#### Single Manager for Conventional Ammunition OPLAN

In the JOPS/OPLAN process, the single manager receives a by-item, time-phased listing of requirements from each Service. Requirements which may be met from Service retail sources are not included.

The single manager uses an in-house model, CARES, to develop sourcing data. In the model, all Service requirements are considered against Service-owned assets by storage location to determine the availability and

best depot source for each movement requirement. These data are then converted into TPFDD format tonnage data and submitted to JDA for further processing by the TOAs.

CARES is also used by the single manager for multiple plan assessments to support the DARCOM Readiness Evaluation System and U.S. Army Operational Readiness Analysis. As a part of this process, a readiness evaluation is developed for each item considering its asset position against requirements. The ratings are as follows:

- C1 - stock availability to 90 percent or greater
- C2 - 80 percent but less than 90 percent
- C3 - 65 percent but less than 80 percent
- C4 - less than 65 percent.

Summary data are prepared by family of items, such as small caliber, mortar, tank, artillery, etc.

The CARES format contains five parts:

- Part I - Displays assets and requirements for 15- and 30-day time periods through the length of the scenario.
- Part II - Displays, by DoD Ammunition Code, the days and percentage short compared to the total requirement.
- Part III - Displays the readiness condition by item.
- Part IV - Displays the readiness condition by family roll-up.
- Part V - Displays the total roll-up by scenario by tons, dollars and cube required and shortfalls.<sup>5</sup>

## MEDICAL

### Army POM

The U.S. Army Medical Materiel Agency (USAMMA) computes total war reserve requirements based on global scenarios provided in the DG and expanded by Army guidance. USAMMA uses peacetime demand for an item factored by

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<sup>5</sup>For all Services combined and a breakout for Army only.

war-time intensity rates and increases in troop strength through the mobilization period. The result is total demand for an item for the pre-positioned and other war reserve portions of the war materiel requirement. This is reduced by assets assumed to be in the peacetime pipeline and assets in the PWRMR for each item.<sup>6</sup> What remains is the requirement for each item for the later resupply periods of the war; these item data are sent to DLA for inclusion in the OWRMR. DLA funds, purchases, stores and manages this portion of the war reserve.

Army PWRMR consists of a number of elements which fall broadly into two categories: initial issue deficiencies and resupply. The initial issue deficiencies are for non-active units.<sup>7</sup>

USAMMA is aware of deficiencies in PWRMR stocks by dollar value per project as reported by the Theater Commander. PWRMR stocks pre-positioned in DLA depots in CONUS are monitored by both DLA and USAMMA.

Deficiencies enter the POM process through the DARCOM submission for PWRMR held in CONUS under the cognizance of USAMMA and through the retail stock fund division POM data for PWRMR in overseas commands. Asset visibility varies by the holding activity for the specific PWRMR element, with the least visibility for PWRMR elements held overseas or outside of direct USAMMA control.

#### Army OPLAN

Every theater OPLAN has an associated Logistics Plan to support the combat forces designated in the theater's OPLAN. The medical annex is prepared by USAMMA. Medical equipment is administratively managed in resupply

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<sup>6</sup>See Appendix E for definitions.

<sup>7</sup>Deficiencies for active units are reflected in the POM, to the extent they are funded, as O&M program requirements for specific commands.

sets. USAMMA responds to the OPLAN's days of supply requirements, given the population in theater, by calculating the number of resupply sets that will be required along with the equipment needed for deploying units.

Although weight and cube data for each resupply set are available, these data are not currently used in the TPFDD process. Instead, tonnage data extracted from AR 101-10 are used in the movement requirements generator. Since the TPFDD movements represent notional tonnage requirements, the process does not represent an expression of current capability. Recently the Army has submitted item requirements to DLA for one OPLAN.

#### Navy/Marine Corps POM

The Naval Medical Command is responsible for determining war reserve requirements for medical material. However, in accomplishing this function the Navy does not develop a true WMR with its component elements, WRMR, OWRMR and PWRMR. In the process followed by the Navy, the OWRMR and the PWRMR are computed separately and appear nowhere in aggregated form.

The OWRMR, which is used for POM purposes, is computed by the Navy Medical Material Support Command and encompasses requirements for the Navy, the Marine Corps and the Coast Guard based on post D-Day strength. These strength data are factored by Navy/Marine Corps peacetime consumption rates as adjusted by a wartime intensity factor. The resultant monthly consumption requirements are aggregated and submitted to DLA for further processing before inclusion in the DLA POM.

The process for PWRMR is more complex. For active forces the PWRMR consists of authorized medical allowance lists and authorized dental allowance lists generically referred to as AMALs. These loads for ships and Marine Corps units are based on wartime manning and consumption rates. Initial requirements for AMALs are funded by the Naval Sea Systems Command for ships

and by the Marine Corps for its units. Replenishment comes from the O&M funds of the operating force, except for investment items which are funded by the Naval Medical Command. For Reserve units and for functions which are not in the active force, the PWRMR consists of AMALs and Advance Base Functional Components (ABFC).<sup>8</sup>

No single activity within the Navy has overall cognizance of all PWRMR. The Medical Material Support Command has lists of all AMALs and ABFCs and consolidated requirements by item, but no asset visibility. The Fleet Material Support Office (FMSO) develops an overall requirement and deficiency list and a dollar value summary, which are submitted semiannually to Naval Supply Systems Command (NAVSUP). In this summary all active force requirements are considered to be filled. Funding for reserve force deficiencies is a NAVSUP function. Assets of PWRMR for reserve forces are held in DLA depots.

#### Navy/Marine Corps OPLANS

The basic building block for OPLANs is the ABFC. The Surgeon staff of each Fleet and Force develops casualty support requirements and, using the lists of ABFCs in Pub. 41B3A, converts these requirements to TPFDD tonnage movement requirements for units. Resupply requirements are included in the TPFDD on a notional basis. However, the Navy has just submitted to DLA item requirements for one OPLAN.

#### Air Force POM

The basic element in Air Force medical planning is a medical package ranging in size from 500-bed hospitals down to small specialized units consisting of initial equipment and consumable supplies. Major Air Force

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<sup>8</sup> ABFCs are wartime-only organizations drawing personnel from other organizations to accomplish a specific shoreside task such as the building, supplying and operating of a 500-bed hospital in theater after the war has started. They exist only on paper in peacetime.

commands, using their command's wartime missions, theater-population figures and expected casualty rates, establish wartime requirements for medical units in consultation with the Air Force Surgeon General. The aggregation of all the equipment for the medical units plus the resupply of consumables represents the Air Force's WRMR which is monitored by the Air Force Surgeon General's Medical Readiness Division.

The medical PWRMR is made up of those packages which are identified for each base in the War Mobilization Plan. The commands are responsible for all PWRMR, identifying deficiencies, storing at the wartime location and reporting status by line-item in the semiannual Stock Status Report.

Deficiencies in PWRMR are monitored by the Surgeon General's office as well as by the day-to-day manager of medical materiel, the Air Force Medical Materiel Field Office. It maintains the Stock Status Report data and computes WRMR and OWRMR, given the PWRMR deficiencies and extended consumption factors. OWRMR are then passed by line-item to DLA.

The Surgeon General's office prepares the Air Force's POM submission for Class VIII PWRMR using the dollar value of deficiencies in the PWRMR stocks held by the bases and guided by the anticipated activation of units over the POM period. Medical materiel in the POM is distributed over a number of entries including O&M, Major Construction Programs, Investment Items, and Stock Funds, War Reserve-Special Obligational Authority.

#### Air Force OPLAN

In the JOPS/OPLAN process, the Air Force Major Command supporting the CINCs is responsible for developing the Air Force Class VIII requirements for organizational elements and resupply. Initially the major command designates units notionally. In the TPFDD process, units currently available are identified and sourced. The remaining units are provided with notional

origins. Resupply requirements are all identified in notional terms. However, item requirements have just been submitted to DLA for one OPLAN.

#### DLA POM

The DLA is the DoD single manager for medical items. It is responsible for maintaining depot stocks to meet all Service customer requirements, including war reserve stocks which are not "pre-positioned" in Service hands or DLA depots.

The Services send OWRMR by line-item to the DLA where safety levels and loss rates are added to produce dollar summary DoD OWRMR for DLA's POM submission. Total PWRMR medical requirements by line-item are not routinely provided by any Service to DLA. DLA does have knowledge of Service-owned PWRMR stocks held in DLA depots for rotation purposes.

#### DLA OPLAN

As wholesale manager of medical materiel, DLA would normally participate in the TPFDD refinement process for Class VIII materiel by providing asset availability and depot source information for resupply packages. The Services currently provide only notional tonnage data in the TPFDD which DLA cannot convert into item requirements. However, all the Services have recently submitted item requirements for one OPLAN. DLA will process these requirements in accordance with TPFDD procedures. This will represent the first participation by DLA in the TPFDD refinement process.

### REPAIR PARTS AND COMPONENT REQUIREMENTS

#### Army POM

The Army WMR computation for repair parts and components begins with the development of Class VII major items Equipment Requirements Data (ERD) and Equipment Density Data (EDD) by DESCOM based on guidance provided by higher headquarters. This guidance includes the forces to be selected, the number of

days of support authorized by theater and the special program requirements. DESCOM uses the Logistics Structure and Composition System, the Basis of Issue Plan including time-phased modernization, the War Reserve Stockage List, and the Wartime Replacement Factor, to compute the ERD. The EDD are developed from worldwide asset data, procurement delivery schedules and redistribution of excesses.

The next step is performed by the MRCs. The ERD/EDD developed by DESCOM, along with the guidance given by higher headquarters, provides the basis for the item selection and requirements computation. The EDD are used to determine the ratios of different models of the same type of equipment to the totals. The parts breakout of each type of equipment is screened to select only combat-essential parts. For the selected items, the requirements are the product of the ERD, the peacetime consumption rate, the wartime intensity factor and the time period covered by the guidance. For all Army-managed items, a total WMR is computed. Appropriate peacetime offsets are applied to determine the WRMR. This is then split into the OWRMR and the PWRMR. The PWRMR is divided into CONUS and overseas portion and, for stock-funded items, the overseas portion is sent to the overseas command for inclusion in their POM submission. The OWRMR and the PWRMR funding requirements are submitted to DARCOM. The OWRMR for the Army-interest Integrated Materiel Manager (IMM) items are computed by Communications-Electronics Readiness Command for electronic items and General Materiel and Petroleum Agency for all other items. These activities compute a "gross" OWRMR based on IMM peacetime demand data. Requirements are forwarded to the appropriate IMM (primarily DLA) for determining a "net" OWRMR and inclusion in the POM.

### Army OPLAN

The responsibility for OPLAN requirements rests with the CINCs and their major Commands. DARCOM is in the process of providing assistance to the CINCs by computing individual OPLAN Class IX requirements by item. The OPLAN requirements are subject to change and approval by the responsible CINCs. Thus far, OPLANs 5027 and 1003 are completed.

DESCOM computes the ERD and EDD for the individual OPLANs in the same manner as for the POM process. The forces and time periods are tailored to the specific plan. The MRCs select the qualifying items and compute the requirements based on maintenance usage data for both Army-managed and non-Army-managed items. The requirements for Army-managed items are sourced, and weight and cube are summarized by plan, source and time. The requirements for non-Army-managed items are passed to the General Materiel and Petroleum Agency for consolidation.

### Navy POM

The Navy War Reserve Program involves many different organizations.<sup>9</sup> The responsibility for PWRMR is assigned to the Fleet Commanders with approval authority vested in the Chief of Naval Operations. The Fleet Commanders may state requirements in specifics or in broad terms. When requirements are stated in broad terms, the responsibility for determining individual item requirements is delegated to a Hardware Systems Command, Inventory Control Point (ICP) or other appropriate activity.

Responsibility for OWRMR for Navy-managed items is assigned to the ICPs and is accomplished in conjunction with the inventory stratification

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<sup>9</sup> A general description of the responsibilities and the process is contained in the "Navy Secondary Item Requirements and Budget Development Manual, Volume VI, War Reserve Program," published by the Naval Supply Systems Command, NAVSUP Publication 514, 1 July 1982.

program. OWRMRs are computed for the balance of the period from that covered by the PWRMR to the maximum period authorized in the DG.

The Ships Parts Control Center (SPCC) computes PWRMR for Fleet and non-Fleet requirements based on Fleet Commander guidance. Fleet requirements are all contained in Fleet Issue Requirements Lists and Tender and Repair Ship Load Lists (TARSLLs), which are incremental to the peacetime Consolidated Shipboard Allowance List. The requirements lists consist of shipboard Fleet Issue Load Lists (FILLs) aboard supply ships, land-based FILLs and additional land-based stocks, which meet lower demand criteria for stockage not identified to a FILL. The peacetime demand is factored by a wartime tempo, and levels are established to achieve a stated percentage of demand satisfaction by means of a variable safety level. The total FILL quantity is divided by the number of supply ships plus the two requirements ashore. The TARSLLs are all afloat except for the Sub-Base Pearl Harbor. The FILLs and TARSLLs support 90 days of wartime demand. The afloat FILLs and TARSLLs are not included in the wholesale secondary item stratification but are included in the retail level stratification. The ashore FILLs and TARSLLs for Navy-managed items are included in the central secondary item stratification. The FILLs and TARSLLs for Navy-interest IMM items are passed to FMSO. SPCC also computes PWRMRs for the Fleet Marine Forces and ABFCs when SPCC has program support for the equipment.

The Aviation Supply Office (ASO) computes PWRMR for non-Fleet aviation materiel requirements. The Fleet requirements are reflected in the Aviation Consolidated Allowance List, which does not separately identify the PWRMR from peacetime requirements and is not separately funded (the Navy is planning to separate the requirements with the implementation of DoDI 4140.47, Secondary Item War Reserve Requirements Development). Non-Fleet PWRMR include

elements of the Fleet Marine Forces, Reserve Air Wings, Overseas Base Elements and others. The methodology for computing requirements is similar to that used by SPCC. PWRMR for Navy-interest IMM items are passed to FMSO.

FMSO computes a preliminary PWRMR for Navy-interest IMM items based on one year of demand data obtained from the IMM. The preliminary PWRMR is compared to the PWRMR provided by SPCC and ASO. If the ASO/SPCC requirement is equal to or greater than the preliminary PWRMR, there is no additional PWRMR. If the FMSO preliminary PWRMR is greater, the difference becomes an additional PWRMR quantity.

FMSO also computes the "gross" OWRMR for all Navy-interest IMM items. FMSO applies a wartime factor to the Navy demand history provided by the IMM to produce two OWRMR demand figures. The first represents the demand for the first three months after mobilization and the second figure represents demand for the remaining period.

#### Navy OPLAN

The responsibility for OPLAN requirements rests with the CINCs and their major Commands, which, in the case of the Navy, are the Fleet Commanders. Requirements for Class IX are currently computed on a notional basis using planning factors expressed in pounds per man per day. The requirements by project, latest arrival date and port of debarkation are provided to JDA for the TPFDD process.

#### Marine Corps POM

The Marine Corps Logistics Base-Atlantic (the Marine Corps ICP) is responsible for computing the Class IX war reserve requirements for the Marine Corps. Maintenance usage data by type of equipment and organization are compared with total demand data to determine consumption factors. Additional considerations include geographic area, equipment not generally used in

peacetime and Force Commanders' input. Separate theater multipliers are used to convert from peacetime to wartime consumption.

The ICP computes requirements from D-Day to the maximum authorized by the DG separately for each active Fleet Marine Force (FMF). Peacetime offsets are applied. The requirements are sent to the FMF Commanders for review before being finalized. The total requirement is currently considered PWRMR. The mount-out portion of the requirement is provided to the FMF as authorization to requisition within funding constraints. The mount-out requirements are funded under O&M. The balance of the requirement is considered to be unfunded stock fund requirements. For reserve forces, total requirements are computed in a similar manner. However, the mount-out portion of the requirement is retained in the wholesale system as PWRMR.

For items managed by non-Marine Corps IMMs, the Marine Corps computes a "gross" OWRMR for the time period authorized by the DG and provides it to the IMM in two increments.

#### Marine Corps OPLAN

Responsibility for development of OPLAN requirements rests with the CINCs and their FMF Commanders. Requirements are notionally based on planning factors which vary by theater. Requirements in tons are developed using the Marine Air/Ground Task Force model in conjunction with the Movement Requirements Generator and reviewed using the Transportation Feasibility Estimator models. Short tons by Class IX subclass are provided to the TPFDD process.

#### Air Force POM

The War and Mobilization Plan published by Air Force Headquarters (AFR 400-24 and AFM 67-1, Volume 1, Part One) provides basic guidance for computing Air Force WRMR. Computation of requirements is a joint responsibility shared by the MAJCOMS and the Air Force Logistics Command (AFLC).

The PWRMR includes recoverable items and consumable items. The PWRMRs are in three categories: (1) Base Level Self-Sufficiency Spares (BLSS) are war reserve spares and repair parts for support of units which plan to operate in place during wartime; (2) War Readiness Spares Kits (WRSK) are air-transportable spares and repair parts for units to be deployed and are normally pre-positioned with the using unit; and (3) Bare Base Support Packages are supplies and spares to establish and sustain operation of a bare base. The computation of the BLSS portion of the PWRMR includes the application of peacetime offsets. The WRSK/BLSS PWRMR generally represents support for a shorter period of time than is permitted under the DG. Two WRSK/BLSS listings are developed: a buy listing projected at the third-year forecast period and a contingency listing based on current year authorizations.

Recoverable item PWRMRs result from the joint effort of the MAJCOMs and AFLC. AFLC develops consumption rates related to the flying hour program which are reviewed by the MAJCOMs. At a joint conference the range of items and the rates to be used are established. AFLC develops WRSK/BLSS worksheets utilizing one of four computation methodologies depending on the aircraft involved. Current emphasis is on the Direct Support Objective stated in terms of the maximum number of aircraft in a not-mission-capable status at the end of the period rather than conventional safety levels. The WRSK/BLSS worksheets are reviewed by the MAJCOMs, and the PWRMR are finalized and furnished to the bases for current year authorizations. Recoverable item OWRMRs are computed by AFLC. A worldwide worst-case requirement is computed from which the peacetime offsets and the WRSK/BLSS PWRMR are subtracted to arrive at the OWRMR.

Consumable item PWRMRs are computed by the MAJCOMs and provided to AFLC. Item range and depth are in consonance with the criteria for development of the WRSK/BLSS. AFLC computes the OWRMR for Air Force-managed consumables. AFLC also computes a "gross" OWRMR for non-Air Force IMM items based on demand data provided by the IMM. The demands are multiplied by a wartime factor to compute wartime consumption. The range of items is based on the WRSK/BLSS, and the requirement is provided to the IMM in two increments.

The Wartime Assessment and Requirements Simulation model being developed by AFLC for operation later in 1983 is designed to determine wartime requirements (POM, budget and buy), allocate resources and determine wartime depot maintenance requirements. The model is designed to operate with multiple D-days and multiple scenarios and with an operational priority matrix to allocate assets or buys.

#### Air Force OPLAN

Responsibility for OPLAN requirements rests with the CINCs and their MAJCOMs. Requirements are notional based on planning factors. Class IX A (Aircraft spares) factors are in terms of pounds per unit and do not include consumable items. All other CLASS IX items are aggregated into a single pounds per man per day factor. Item-specific or source-specific requirements are not developed in the TPFDD refinement process.

#### DLA POM

DLA WMR responsibility is limited to OWRMR items for which it is the IMM. DLA provides item demand data to the Services. The Military Services compute a global scenario OWRMR and provide the requirement in two 90-day increments. DLA computes a wartime safety level that is added to the first month of the "gross" OWRMR. The peacetime safety level, one-half the operating level, the peacetime demand and War Materiel Procurement Capabilities are deducted from the "gross" OWRMR to determine the OWRMR. The

OWRMR is divided into two increments -- one of which represents funding guidance and is the basis for DLA's POM submission. DLA computes a "paper" allocation of OWRMR by Service based on the percentage of Service requirements to the total "gross" OWRMR for an item. This information is provided to the Services semiannually.

DLA OPLAN

DLA attends the TPFDD refinement conferences as an observer but does not participate. The Services are not providing line-item requirements data for DLA-managed items. Consequently, DLA does not source Class IX requirements. Plans have been developed for the Army to provide item-specific requirements for an OPLAN. DLA will provide time-phased asset availability sourced by item to include those items due-in by scheduled date. The DLA model will summarize the item data by OPLAN, Service, subclass, time phase, and source and indicate the shortfall. Minor changes would be required to process multiple OPLANs.



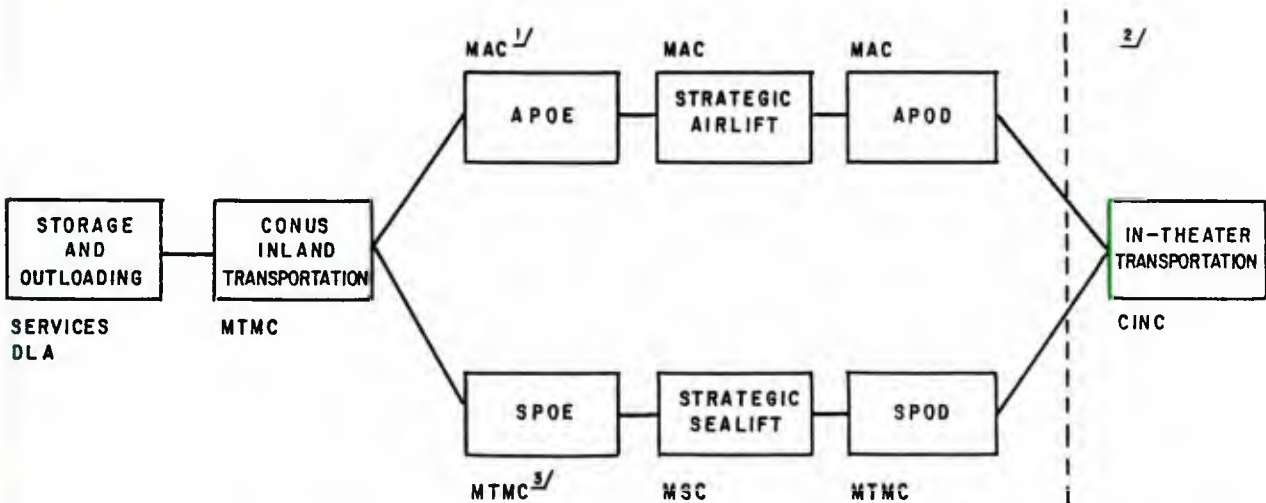
APPENDIX C

THE DISTRIBUTION AND MOVEMENT SYSTEM

INTRODUCTION

The principal nodes of the distribution system are shown in Figure C-1. Responsibility is shared among the Military Services, the CINCs, TOAs and DLA. The Services and DLA are responsible for the receiving, storage and outloading capabilities at their respective installations. MTMC is responsible for CONUS commercial transportation and common-user SPOEs and SPODs. MAC is responsible for strategic airlift and APOEs and APODs. MSC is responsible for strategic sealift. Each of these segments of the distribution system is discussed in more detail below. The CINCs are responsible for in-theater movement which currently is not reflected in the TPFDD and is not included in this study.

FIGURE C-1. PRINCIPAL NODES OF THE DISTRIBUTION AND MOVEMENT SYSTEM



<sup>1/</sup> EXCEPT FOR AFLC and NAVY AERIAL PORTS  
<sup>2/</sup> BEYOND SCOPE OF THIS REPORT  
<sup>3/</sup> EXCEPT FOR NAVY OPERATED TIDEWATER TERMINALS

APOE/APOD AERIAL PORT OF EMBARKATION/ DEBARKATION  
 CINC COMMANDER IN CHIEF OF UNIFIED and SPECIFIC COMMAND  
 MAC MILITARY AIRLIFT COMMAND  
 MSC MILITARY SEALIFT COMMAND  
 MTMC MILITARY TRAFFIC MANAGEMENT COMMAND  
 SPOE/SPOD SEAPORT OF EMBARKATION/ DEBARKATION

## STORAGE AND OUTLOADING

This node of the distribution system includes the functions of receiving; storing; picking, packing and marking materiel for shipment; containerization; and arranging for transportation. Constraints on capability include personnel, equipment and facilities. Workload varies over time by number of items being shipped, class of supply, weight, cube and special characteristics (such as hazardous materiel).

### POM

The higher headquarters (Services or DLA) of the activity storing the materiel is responsible for programming in the POM for required additional resources. None of the Service POM submissions appear to consider the DG global scenario as the basis for determining need for enhancement to depot outloading capability. Measures of capability were not observed in the POMs. The Army DARCOM storage activities base their Mobilization Capability Reports on assets available to meet time-phased requirements. These requirements are based on a one-theater scenario. The Mobilization Capability reports reflect shortfalls, identify cause and indicate funds needed to achieve the required capacity.

There is a general consensus among storage officials contacted that storage space is adequate or military construction has been programmed to coincide with delivery of assets.

### OPLAN

Receiving and outloading capabilities are currently reported to MTMC on the DD Form 1726, CONUS Military Installations Materiel Outloading and Receiving Capability Report. Instructions and format are contained in a joint

regulation.<sup>1</sup> The objective of the report is to provide data on current peacetime and mobilization capability to receive and outload materiel by rail and motor truck to satisfy materiel movement requirements. MTMC is responsible for analyzing the data in connection with its peacetime and strategic mobility mission and for providing analyses and summary data to ASD(MRA&L), JCS, the Services and DLA. The report and instructions are in process of revision to provide for incremental buildup to mobilization capacity, containerization capability and other improvements. MTMC also uses the data as a constraint in their model for developing OPLAN movement tables. The examination of regional OPLANs individually does not evaluate outloading capability under the most demanding of the DG planning scenarios.

#### MTMC

##### Mission and Functions<sup>2</sup>

MTMC is responsible for several nodes of the distribution system: CONUS commercial and military land transportation; CONUS and overseas common-user ocean terminals, except tidewater terminals assigned to the Navy; and commercial ocean terminals within CONUS.

MTMC is responsible for providing transportation planning support to OJCS, Unified and Specified Commands, the Services and DoD agencies in support of JCS plans. MTMC is also responsible for submitting to OSD annual operating plans and programs of the agency in support of DoD requirements.

#### POM

MTMC has a need for movement requirements based on the DG planning scenario in order to compare with capabilities and determine shortfalls. The latest comprehensive statement of requirements is contained in the SMRP-83

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<sup>1</sup>AR 55-4/OPNAVINST 11200.7A/AFR 75-23/MCO 4810.01A/DSAR 4510.8

<sup>2</sup>DoDD 5160.53, "Single Manager Assignment for Military Traffic, Land Transportation, and Common-User Ocean Terminals," March 24, 1967.

study completed in 1978 under the auspices of JCS. The study included a detailed analysis of inland transportation requirements. Using the requirements developed in this study, MTMC developed POM requirements for additional heavy-duty flat cars and upgrading of ocean terminal facilities. These requirements were included in the Army's POM submission. Except for these deficiencies, inland transportation was considered adequate.

### OPLAN

As one of the TOAs, MTMC is a major participant in the JOPS/OPLAN process. The refined TPFDD movement requirements of an OPLAN are decremented first by MAC to reflect the strategic airlift capability. MTMC processes the remaining movement requirements utilizing the MAPS II. The constraints in this model include outloading capability, CONUS rail and motor truck availability, throughput capacity of CONUS SPOEs and the CINCs designated SPOD. The model develops movement tables from point-of-origin to the MAC designated APOE for air movements and to the MTMC-selected SPOE for water movements. The movement requirement data are then passed to MSC to assess strategic sealift capability.

To the extent that notional rather than actual requirements data are used, the true shipping requirements may vary greatly from the estimates. The examination of regional OPLANs individually does not provide an evaluation of the CONUS movement or ocean terminal- and port-handling capabilities under the most demanding scenario.

### MAC

#### Mission and Functions<sup>3</sup>

MAC is responsible for several nodes of the distribution system: CONUS and overseas aerial ports/air terminals at Air Force installations

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<sup>3</sup>DoDD 5160.2, "Single Manager Assignment for Airlift Service," October 17, 1973.

(terminals at other installations are the responsibility of the host Service) and civil airfields serving MAC channels flown by scheduled MAC airlift; and strategic airlift between CONUS and overseas areas, between and within overseas areas, and within CONUS when necessary for reasons of national security.

MAC is responsible for preparing long- and short-range forecasts of airlift requirements based on evaluated requirements submitted by the DoD Components. These requirements are matched with airlift capabilities and submitted to OJCS together with recommendations as appropriate to assure proper balance. MAC is also responsible for submitting to OSD the annual operating plans and programs of the agency in support of DoD requirements.

#### POM

MAC has a need for movement requirements based on the DG global scenario in order to compare with capabilities and determine shortfalls. The latest comprehensive study was the CMMS completed in 1981. Congress expressed concern over U.S. strategic lift capability. The study analyzed total lift demands considering several scenarios. Resupply requirements were notional. Alternatives of airlift, sealift and pre-positioning were evaluated. Based on the requirements developed in this study, MAC developed POM requirements for additional strategic airlift capability by enhancing existing aircraft and acquiring additional aircraft. These requirements were included in an Air Force POM submission.

#### OPLAN

MAC is the first of the TOAs to participate in the JOPS/OPLAN process after the first refinement conference. MAC processes the refined TPFDD movement requirements through its IMAPS, which includes three subsystems. The constraints include ramp parking space, materiel handling equipment, number of aircraft by type, crews and available hours of airfield. The models determine

the APOE and develop movement tables to the APOD specified by the CINCs to meet his earliest and latest arrival dates. The movement requirements to each APOE are provided to MTMC for determining CONUS inland transportation requirements.

To the extent that notional rather than actual requirements data are used, the true shipping requirements may vary greatly from the estimates. The data from IMAPS are used to plot graphs which show requirements and capability in tons over time. The examination of regional OPLANs individually does not evaluate the aerial port and strategic airlift capability under the most demanding scenario.

### MSC

#### Mission and Functions<sup>4</sup>

MSC is responsible for the ocean transportation node of the distribution system and provides ocean transportation service, except that performed by the fleet, for the movement of personnel, cargo, bulk petroleum and mail to all components of DoD.

MSC is responsible for preparing long- and short-range forecasts of sealift requirements, based on their evaluation of requirements submitted by the DoD components. These requirements are matched with sealift capabilities and submitted to OJCS together with recommendations as appropriate to assure proper balance. MSC is also responsible for submitting to OSD the annual operating plans and programs of the Agency in support of DoD requirements.

### POM

MSC has a need for movement requirements based on the DG planning scenario in order to compare with sealift capabilities and determine short-falls. A study to determine sealift requirements is being conducted at the

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<sup>4</sup>DoDD 5160.10, "Single Assignment for Ocean Transportation," March 24, 1967.

## APPENDIX D

### JOINT OPERATIONS PLANNING SYSTEM (JOPS)<sup>1</sup>

JOPS is a JCS system designed to enhance global and regional joint planning. JOPS supports the strategic direction function of JCS and provides a system and procedures for OPLAN development, review and execution. JOPS encompasses both deliberate planning and time-sensitive planning for joint operations.

Several key events provide the basic guidance and constraints for the development of OPLANs. National strategy, as expressed in the Joint Strategic Planning System, is the starting point for military planning. This strategy is contained in the JSPD which is used to advise the Secretary of Defense on the military strategy and force structure required to attain the national security objectives. The JSPD is not fiscally constrained and becomes input to the DG. The DG sets forth illustrative planning scenarios, establishes defense priorities, contains the rationale for Defense programs and sets the total obligation authority limits for each Military Department and Defense Agency. It is the basis for the DoD components to prepare their POMs. Each DoD component prepares and submits to the SECDEF a POM which contains details of the forces, manpower and materiel needed to attain the objectives of the DG within its fiscal constraints. The JCS forwards to the SECDEF a Joint Program Assessment Memorandum which provides a risk-assessment of the DoD's ability to execute the approved national military strategy based on the POM programs. OSD and OJCS analyze the Service POMs against the DG objectives for balance between force structure, modernization, readiness and sustainability.

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<sup>1</sup>The Joint Staff Offices Guide, Armed Forces Staff College Pub. 1, provides an excellent discussion of the planning process and its relationship with other DoD and JCS systems.

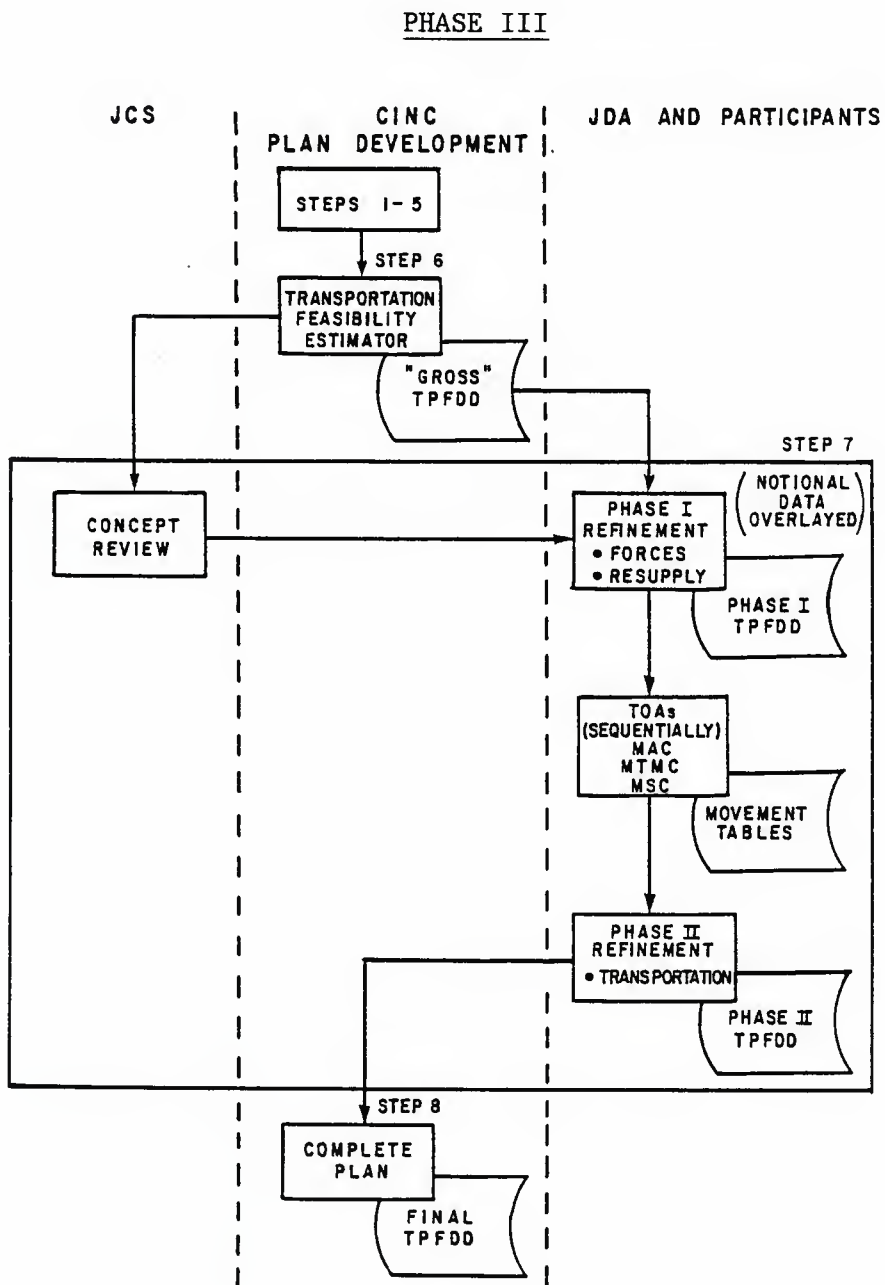
Subsequent to resolution of issues by the DRB, the POMs become the basis for developing the budget.

Using the scenario and priorities set forth in the DG, and the forces and logistics support available from the POM and budget processes, the JCS issues the JSCP. The JSCP provides a statement of strategy to the unified and specified commands and establishes tasks for the commands. The tasks include those which require the preparation of operation plans in accordance with the JOPS. JSCP allocates major combat forces and JCS-controlled resources, including strategic mobility, to the CINCs for planning. Materiel resources are not allocated. Both JSCP and JOPS are complemented by their Service counterparts.

The scope of JOPS is much broader than the concern of this study. We assume the validity of the military operations aspects of the plan (e.g., the Commanders' estimates, the concept of operations and the deployment of forces) and are concerned only with those aspects relating to the capability of the logistics system to support the plan with materiel and movement to the overseas theater. JOPS includes Time-Sensitive Planning (JOPS Vol. IV) for crisis situations, which is outside the scope of this study, and Deliberate Planning (JOPS Vols. I, II & III), the process applied in peacetime, which is of direct interest here. There are five phases of Deliberate Planning: Phase I, Initiation; Phase II, Concept Development; Phase III, Plan Development (shown in Figure D-1); Phase IV, Plan Review; and Phase V, Supporting Plans. Phases I, II, IV, V and the first steps of Phase III are strictly military planning. Other elements of Phase III, shown in Figure D-1, are concerned with the logistics capability to support the plan. In Steps 1 through 5 of Phase III, the required forces (type or actual units) are identified, and notional logistics support requirements are calculated in gross tonnage by class of supply. No specific items are identified. Planning factors are used to block out

space on strategic lift assets. Notional calculations, as performed by the Movement Requirements Generator, do not lead to the logistic feasibility of the plan but are a statement of requirements. These requirements are reflected in the TPFDD file.

FIGURE D-1. JOPS DELIBERATE PLANNING PROCESS



In Step 6 the notional movement requirements are processed through the Transportation Feasibility Generator, and the initial "gross" TPFDD is produced. The TPFDD Refinement portion of Step 7 is of direct interest to this study and is discussed in detail below (See Figure D-1). The final step of Phase III involves documentation, subsequent to which the CINCs forwards the plan through channels to the JCS for approval (Phase IV).

Among the objectives of JOPS is the development of a logistically feasible OPLAN. In pursuit of this objective, the JOPS process includes two refinement conferences hosted by the JDA. The purposes of the first conference (Phase I Refinement) are: (1) to update the TPFDD with actual force data and resolve any force or personnel shortfalls, and (2) to the extent available, replace the notional materiel requirements with "sourced" data. Sourcing requires the computation of individual item requirements, the determination of asset availability and the point of origin. This process, to the extent it is accomplished, is performed by Service and single manager ICPs, and the data are summarized into tons by time-phased shipments from actual points of origin. Separate records are generated for shortfall quantities. Upon completion of the conference, the TPFDD contains actual unit data and actual movement requirements to the extent unit specific and sourced item data are available. Since sourcing requires actual item requirements and asset availability determination, it becomes a statement of logistics capability. To the extent that resupply requirements are not sourced, the requirements are notional and of questionable validity, and logistics capability is unknown. The TOAs next use the TPFDD for the production of movement schedules/tables.

The second TPFDD refinement conference (Phase II Refinement) is convened after the TOAs have completed their coordination and analysis. The purpose of

the second conference is to coordinate the combined transportation requirements and shortfalls with the supported commander. The supported commander then completes the detailed annexes required for an OPLAN and submits them for final approval.

The emphasis throughout the JOPS process, from a logistics point of view, is on current strategic lift capabilities to move currently available assets as opposed to the shortfall between the materiel and movement requirements of the plan and the capability of the logistics system. Furthermore, the JOPS process looks at OPLANs individually and therefore does not provide an evaluation of materiel availability under a global scenario.

The inclusion of the family of OPLANs for the DG planning scenario in the JOPS process and the extension of sourcing to all classes of supply would not only provide the JCS, CINCs and Services with a more realistic assessment of logistic support capability for the OPLANs, but would provide the JCS and the Services with a basis for POM requirements.



## APPENDIX E

### WAR RESERVE DEFINITIONS<sup>1</sup>

#### WAR MATERIEL REQUIREMENT (WMR)

The quantity of an item required to equip and support the approved forces specified in the Secretary of Defense Planning and Programming Guidance Memorandum (Logistics Planning and Programming Guidance Section) through the period prescribed for war materiel planning purposes.

#### WAR RESERVE MATERIEL REQUIREMENT (WRMR)

That portion of the WMR required to be on-hand on D-Day. This level consists of the WMR less the sum of the peacetime assets assumed to be available on D-Day and the War Materiel Procurement Capability.

#### WAR RESERVE STOCK (WRS)

That portion of the total materiel assets which is designated to satisfy the WRMR.

#### PRE-POSITIONED WAR RESERVE MATERIEL REQUIREMENT (PWRMR)

That portion of the WRMR which approved Secretary of Defense guidance dictates be reserved and positioned at or near the point of planned use or issue to the user prior to hostilities, to reduce reaction time and to assure timely support of a specific force/project until replenishment can be effected.

#### PRE-POSITIONED WAR RESERVE MATERIEL STOCK (PWRMS)

The assets which are designated to satisfy the PWRMR.

#### OTHER WAR RESERVE MATERIEL REQUIREMENT (OWRMR)

This level consists of the WRMR less the PWRMR.

#### OTHER WAR RESERVE MATERIEL STOCK (OWRMS)

The assets which are designated to satisfy the OWRMR.

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<sup>1</sup>Source: DoDD 4140.2, December 4, 1974.



APPENDIX F  
GLOSSARY OF TERMS

AAO	Authorized Acquisition Objective
ABFC	Advanced Base Functional Components
AFLC	Air Force Logistics Command
ALA	Army Logistics Analysis
AMALs	Authorized Medical Allowance Lists
APODs	Aerial Ports of Debarkation
APOEs	Aerial Ports of Embarkation
ARRCOM	Army Armament Materiel Readiness Command
ASD(MRA&L)	Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics)
ASO	Aviation Supply Office
BLSS	Base Level Self-Sufficiency Spares
CAIMS	Conventional Ammunition Inventory Management System
CARES	Conventional Ammunition Readiness Evaluation System
CINCs	Commanders-in-Chief
CMMS	Congressionally Mandated Mobility Study
CONUS	Continental United States
DARCOM	Army Materiel Development and Readiness Command
DESCOM	Depot Systems Command
DG	Defense Guidance
DLA	Defense Logistics Agency
DoD	Department of Defense
DoDD	Department of Defense Directive
DoDI	Department of Defense Instruction
DRB	Defense Resources Board

EDD	Equipment Density Data
ERD	Equipment Requirements Data
FILLS	Fleet Issue Load Lists
FMF	Fleet Marine Force
FMSO	Fleet Materiel Support Office
ICP	Inventory Control Point
IMAPS	Integrated Military Airlift Planning System
IMM	Integrated Materiel Manager
JCS	Joint Chiefs of Staff
JDA	Joint Deployment Agency
JOPS	Joint Operations Planning System
JSCP	Joint Strategic Capabilities Plan
JSPD	Joint Strategic Planning Document
LOGSACS	Logistics Structure and Composition System
MAC	Military Airlift Command
MAJCOM	Major Commands
MAPS II	Mobility Analysis and Planning System
MRCs	Materiel Readiness Commands
MSC	Military Sealift Command
MTMC	Military Transportation Management Command
NAVSUP	Naval Supply Systems Command
O&M	Operations and Maintenance
OJCS	Office of the Joint Chiefs of Staff
OPLANs	Operational Plans
OSD	Office of the Secretary of Defense
OWRMR	Other War Reserve Materiel Requirement
POM	Program Objective Memoranda

PPBS	Planning, Programming and Budgeting System
PWRMR	Pre-positioned War Reserve Materiel Requirement
SACS	Structure and Composition System
SEACOP	Strategic Contingency Planning System
SECDEF	Secretary of Defense
SMRP-83	Strategic Mobility Requirements Program
SPCC	Ships Parts Control Center
SPODs	Sea Ports of Debarkation
SPOEs	Sea Ports of Embarkation
TARP-I	Total Army Requirements Program -- Phase I
TARSLs	Tender and Repair Ship Load Lists
TOAs	Transportation Operating Agencies
TPFDD	Time-Phased Forces Deployment Data
USAMMA	U.S. Army Medical Materiel Agency
WMR	War Materiel Requirement
WRMR	War Reserve Materiel Requirement
WRSK	War Readiness Spares Kits



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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  The primary role of the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) (ASD(MRA&L)) in the Planning, Programming and Budgeting System (PPBS) is to advise in formulation of the Defense Guidance, review the logistics portions of the Program Objective Memoranda, and make recommendations regarding allocation of resources. To do this, he should be able to evaluate the current capability of the logistics system, determine the requirements of the Illustrative Planning scenario specified in the Defense Guidance, and decide whether the programs proposed by the Military Services and Defense		

20. Continued

Agencies will achieve the needed capability. The ASD(MRA&L) has never been able to make such a comprehensive assessment of logistics system capability; the information provided by the PPBS is inadequate. The Joint Chiefs of Staff, however, have a Joint Operations Planning System that, with enhancements, could provide the information the ASD(MRA&L) needs.