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**ISSUE PRIORITY GROUPING THREE  
SHIPMENT CONSOLIDATION  
EFFECTIVENESS MODEL**

**MAY 1989**

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DEPARTMENT OF DEFENSE

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Cameron Station,  
Alexandria, Virginia 22304-6100

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# ISSUE PRIORITY GROUPING THREE SHIPMENT CONSOLIDATION EFFECTIVENESS MODEL

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Issue Priority Grouping Three  
Shipment Consolidation Effectiveness Model



May 1989

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A-1

LT Stephen R. Von Hitritz, SC, USN  
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DEFENSE LOGISTICS AGENCY  
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DLA-LO

FOREWORD

This report summarizes the work done and conclusions reached in a study of depot low priority shipment consolidation effectiveness. The analysis was performed by the Operations Research and Economic Analysis Management Support Office for the Directorate of Supply Operations, Transportation Division.

IPG III requisitions for compatible items and with the same destinations are consolidated to make maximum use of transportation and warehousing funds. This process is highly automated but frequently the oldest requisition is removed from the shipment data bank before the routine drop date. The resulting consolidation is thus smaller than it would have been under ideal conditions.

The model constructed for this study emulates the consolidation process. The optimization of the consolidation process assumes a perfect system but can still be a useful tool in determining effectiveness trends at DLA supply depots. For a typical depot in a 45 day period this model shows that under optimal conditons, small parcel shipments could be reduced in excess of 63 percent.

A handwritten signature in black ink, appearing to read "Roger C. Roy".

ROGER C. ROY  
Assistant Director  
Policy and Plans

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I. INTRODUCTION. In a letter dated 8 September 1986, Defense Logistics Agency's Directorate of Supply Operations, Transportation Division (DLA-OT) requested that DLA Operations Research and Economic Analysis Office (DLA-LO) analyze the effectiveness of our depots in processing Issue Priority Grouping (IPG) III Material Release Orders (MROs). Part I (Depot Effectiveness IPG III Processing) of this analysis was completed in July 1987 and analyzed the effectiveness of DLA's depots in processing IPG III MROs and the economic viability of DLA's 98 percent on-time goal for this priority. Part II consisted of developing a model to measure depot IPG III shipment consolidation effectiveness.

#### A. Background

Requisitions are received at a depot, when the information is transmitted to the Mechanization of Warehousing and Shipment Processing (MOWASP) System by the DLA Supply Center. IPG III requisitions are allowed a specific amount of time to reach the customer. Therefore, IPG III requisitions for compatible items and same location can be consolidated into one shipment.

The consolidation process begins with the receipt of an MRO at a depot. A Mandatory Date to Transportation (MDT) is assigned to each MRO which reflects the longest period of time for shipment to meet delivery requirements to the consignee within the Uniform Materiel Movement and Issue Priority System (UMMIPS) timeframe. The MRO may be held in the bank until the Document Release Date (DRD) (MDT less depot processing and transportation hold times) is achieved, but generally it is dropped earlier than the date to satisfy workload requirements. All incoming IPG III MROs are placed into the MOWASP system and segregated into a computer bank or repository by geographic distribution area. Each depot designates its own geographic regions. The consolidation process occurs when all MROs to a given DoDAAC, freight destination (DCR), or geographical region are pulled from the bank. The MROs sharing specific characteristics (e.g. same DoDAAC, compatible warehouse locations and various shipping compatibility factors, level of hazard; temperature control, etc.). A shipping unit can apply to either a freight and small parcel shipment consolidation or just a small parcel consolidation. A Transportation Unit is the consolidated shipment tendered the carrier; it can be composed of a single, or multiple, shipment unit.

When the oldest requisitions in a geographical area's bank begin physical processing to reach the customer on time, all of that area's or customer's shipping units are identified and listed on a computer printout. As a shipping unit drops from the bank, it queues for processing at the appropriate warehouse in IPG sequence. The warehouse is allowed one to three days (each depot fixes its own standard) to "pick and pack" the shipping unit lines together (in boxes or on pallets) as a shipping unit. Once shipping unit lines are packed into a shipping unit, transportation has two days to send the shipping unit on its way to the customer, either via a small parcel mode or as a freight shipment under a consolidated Government Bill of Lading (GBL), depending on the weight and cube.

B. Problem Statement. Develop a model to measure depot IPG III shipment consolidation effectiveness. Sometimes the oldest requisition is removed from the bank before the scheduled DRD. The resulting consolidation is thus smaller than it should be under ideal conditions.

C. Objectives

1. For each DLA depot, measure the number of shipping units built, the number of small parcel shipments, and the number of transportation units built.

2. For each DLA depot, determine the optimal number of small parcel shipments and the optimal number of transportation units which could have been built.

D. Scope

1. In accordance with the client, the data base will consist of a period of 45 days to be selected anytime during the past twelve months.

2. Only CONUS shipments will be considered.

3. Eliminate single line shipments for which truckload minimum weights have been achieved.

4. Shipments with incompatible cargo codes and special requirements codes will not be considered.

5. The model does not consider freight cost savings. For freight cost savings to be computed, a guaranteed traffic rate data base would have to be constructed. Rates from all depots to all destinations are frequently changed by carrier performance so the cost and time of constructing this data base would be prohibitive.

6. The model does consider small parcel cost savings. These savings calculations are detailed in Appendix B. If the figures at Defense Depot Tracy, California for the sample forty-five day period are extended to the other six DLA depots, savings of \$4,828,131 are conceivable. Small parcel Mode 9 (Overseas) shipments were not costed out.

II. CONCLUSIONS AND RECOMMENDATION

A. Conclusions Drawn From the Model

Under optimal conditions, small parcel shipments can be reduced thus realizing significant cost savings.

Reliance on Mode A Truckload (TL) shipments would increase, while both Less-Than-Truckload (LTL) and small parcel shipments would decrease substantially.

Using the results from this model, transportation managers will be able to quickly determine the efficiency level of their consolidation effort.

It is estimated that it will take one man-month to make adjustments and to run the model for all six DLA depots for one period of time.

B. Recommendation. This model should be used to determine consolidation efficiency trends at DLA depots. The results obtained from this model should be weighed against the number and significance of the assumptions made. Individual depots will now be able to compare consolidation performance against an ideal measure. Headquarters staff personnel will be able to track the performance of each of the DLA depots and suggest areas of possible improvement.

III. DATA DEVELOPMENT. The analysis methodology requires two types of data about the system being modeled: MRO data and bank times.

#### A. Depot MRO History Records

DLA retains a computer record of every MRO successfully processed and delivered to a military customer. Each customer is identified by its own account number, the Department of Defense Activity Address Code (DODAAC) and by its central delivery point, the Destination Cross-Reference Code (DCR). Detailed inspection of the records pertinent to the analysis revealed many different types of MROs and substantial diversity among types. The requisitions differed greatly in volume, weight, item type, and frequency of demand; furthermore, over 4700 separate central delivery points, DCRs, received material from the six DLA depots, with the total weight received by individual DCRs ranging from a few pounds to millions of pounds a year.

For the forty-five days selected, the model matches each MRO by National Item Identification Number (NIIN) to a separate stock number file to look up the corresponding special requirements code, cargo code, and hazardous storage compatibility code. The hazardous storage code is used to eliminate radioactive items from the input MROs.

Other conditions are required for an MRO record to be selected. Specifically, the MRO records selected for analysis were those which showed:

1. IPG - 3. MROs from IPG I and IPG II were not used as inputs.
2. DODAAC. The first position of this code indicated if the activity was Foreign Military Sales (FMS) or not. FMS shipments were specifically excluded.
3. CONUS Parcel Post Zone has a value of 1 through 8. CONUS shipments are numbered 1-8, overseas shipments are given a value of 9.

4. Nonzero weight. An entity must have weight to have meaning in the model. Because some MRO quantities are "rolled up" to the lead MRO in a transportation unit, the weight on a selected record may not always be attributable to the NIIN on the record; however, the resulting compatibility codes are representative of the items accounting for the weight, and the other information is accurate.

5. Mode - A (Truckload), B (Less Than Truckload), G (Surface Parcel Post), or 5 (United Parcel Service). Material shipped by any other mode is rarely evaluated in IPG III on-time performance.

6. Geographic Area Code in range A- Z. Each depot can also assign codes in range 0 - 9, but these are often reserved for unusual (e.g. - disposal shipments) or overseas shipments.

7. Matchable NIIN. Needed for consolidation criteria. Rare MROs show blanks or non-MOWASP items in this field.

8. Document Identifier Code not equal to "A5J". This value indicates a property disposal shipment.

9. Hazardous Storage Compatibility Code not equal to "A1". This value indicates radioactive items.

B. Bank Times. The duration of the bank cycle is based on the day of the week and the estimated shipping time for the distribution area. The model uses the depot and area to locate this information in a data table.

#### IV. SIMULATION MODEL

##### A. System Description: The MRO Process

DLA Supply Centers (DSCs) transmit military supply requests to depots as MROs, where each MRO represents some quantity of only one type of item. Each requisition is identified by the customer's DODAAC. The MROs are also distinguished by Issue Priority Group. Those MROs which are IPG I or IPG II are separated from the IPG III MROs because they have shorter delivery suspenses and will rarely combine with the latter for shipment.

Each IPG III MRO arriving at a depot is stored in a computer "bank" for its distribution area and its corresponding DCR. It is combined into a shipping unit with other MROs from the same DODAAC when certain compatibility criteria are met. A MRO is then identified by shipping unit number and its own line number for that shipping unit. When the oldest MROs in an area's bank must begin physical processing at a warehouse in order to reach the customer on time, some or all of the area's shipping units are "dropped" from the computer.

When a shipping unit drops from the bank, it queues for processing at the appropriate warehouse behind higher priority IPG I and IPG II MROs. The warehouse is allowed typically one to three days to "pick" the material on each line from its storage location, pack the lines together (in boxes or on pallets) as the shipping unit, and send it to the freight or small parcel terminal for shipping. If designated for freight, a shipping unit will be held at the terminal for consolidation with other units destined for the same destination and loaded on a truck to leave on a predetermined day. The total time at the freight terminal is usually between 24 and 48 hours.

The process of satisfying IPG III MRO demand differs from depot to depot because each depot processes a unique set of MROs and employs different resources to perform its mission. The number of supply warehouses and the physical layout of each depot is different, as is the degree of use of automated conveyors, forklifts, and various packing devices. Furthermore, the unique geographic relationship of each depot to its customers has led depot managers to divide the country differently into distribution areas for planning, banking and transportation purposes.

Despite these differences, each depot behaves according to the uniform Mechanization of Warehousing And Shipping Procedures (MOWASP). This set of regulations describes detailed policies and procedures for processing MROs the same way at all depots. Therefore, while the depots may employ different internal means for certain tasks, all six depots do conform to a general system.

#### B. Model Development Approach

1. Extract records from the MRO history file and match them with the NSN file for the period to be covered for a DLA depot.

2. Delete all records that are not complete, delete records indicating more than one shipment, and delete records of items that cannot be combined into one shipment.

3. Sort the DLA file by geographical area, DCR, cargo code, special requirements code, and depot receipt date.

4. Construct FORTRAN model for mainframe application to consolidate requisitions into shipments.

5. From the same trimmed file, count the number of shipments actually built and the number of shipments built under optimal circumstances. These "optimal" conditions are described in the next section.

### C. Model Features and Assumptions

1. General Model Concept. The MRO process can be described as the flow of entities (lines or shipping units through a network of queues, branching nodes, and service activities). This network consists of four different processes: arrival, banking, processing and transportation. Each MRO passes sequentially through the four processes by itself or as part of a larger unit, or entity.

2. MRO Arrivals. An entity is created each time an MRO record is read from the input file.

### 3. Shipping Unit Processing

The picking and packing operations at a depot are complex and labor-intensive, and differ greatly between depots and between warehouses at a depot. The details of warehousing were not critical to estimation of the analysis measures of comparison. The chief modeling needs in this area were to create an appropriate delay between the time a shipping unit drops for processing and the time it is shipped, and to route processed shipping units to the correct transportation terminal (freight or small parcel).

The shipping unit's processing time is assumed to be independent of the number of lines and the other shipping units being processed. Perfect supply is assumed: any shipping unit dropped will be successfully picked, packed and delivered to transportation.

## V. SIMULATION RESULTS

A. The data chosen for verification of the model was taken from Defense Depot, Tracy California for the period 14 February 1988 to 31 March 1988. The depot and time period were randomly selected. Model output is summarized in Table 1.

Table 1

### SUMMARY OF MODEL OUTPUT (SHIPPING UNITS)

	<u>Actual</u>	<u>Optimized</u>
Total Freight Shipping Units	19,286	4,112
Total Small Parcel Shipping Units	<u>27,726</u>	<u>13,099</u>
Total Shipping Units	47,012	17,211*

\* indicates an improvement of 63%

B. The model assumes perfect supply, that is no human or mechanical errors throughout the consolidation process. The consolidation performance is undoubtedly high in each case because actual warehouses will occasionally process an item too late for shipment in the intended cycle, but this is not permitted in the model. The optimized model will not drop records. Thus the optimized model will process more weight than what actually occurs. We expect the optimized system to move more freight in fewer shipments. The output merely reinforces this outcome.

C. These examples merely confirm that the model's output is useful only if interpreted in light of the model's assumptions. In general, the model assumed that all depots performed near a theoretical optimal level of efficiency for the particular time standard.

D. Appendix B is a listing of a small portion of output from this model. It covers Geographic Areas A and B only and is included for illustration purposes.

APPENDIX A

Model Code

LEVEL 1.3.O (MAY 1983)

VS FORTRAN

DATE: OCT 28, 1988 TIME: 08:56:23

PAGE: 1

REQUESTED OPTIONS (EXECUTE): NOTF, NODECK, NOLIST, OPT(O)

OPTIONS IN EFFECT: NOLIST NOXREF NOGOSTMT NODECK SOURCE TERM OBJECT FIXED NOTEST NOTRMFLG SRCLEN(500) CHARLEN(60) NAME(MAIN) LINECOUNT(60) CHARSYM SDUMP

```
*.....1.....2.....3.....4.....5.....6.....7.*.....8.  
1 ISN 1 INTEGER RECDE, PP, FR, MDATE('10000')  
2 ISN 2 REAL WT, PWTGT('10000'), FWGT('10000')  
3 ISN 3 CHARACTER*'1' GA, CC, SRC  
4 ISN 4 CHARACTER*'2' DEPOT  
5 ISN 5 CHARACTER*'6' DCR, PAREA('10000,5'), FAREA('10000,5'), DODAC  
6 ISN 6 C READ TYPE OF DEPOT AND BANK TIMES FOR GEOGRAPHICAL AREAS  
C READ (11,1010) DEPOT, KA, KB, KC, KD, KE, KG, KH, KI, KJ, KK, KL,  
C KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ,  
C $ $ $  
C 1010 FORMAT (A2,3512)  
7 ISN 7 C READ RECORDS, ONE AT A TIME, COPY ALL RECORDS FOR GA A TO FILE 10  
C 100 CONTINUE  
C 100 READ(9,1000,END=200)GA,DCR,DODAC,CC,SRC,RECDE,WT  
C 1000 FORMAT (A,2X,A6,2(1X,A),1X,13,1X,F9.3)  
C IF (GA, EQ, 'A') THEN  
C KTR=KTR+1  
C 1001 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT  
C 1001 FORMAT (A,2X,A6,1X,A6,2(1X,A),1X,13,1X,F9.3)  
C END IF  
C GO TO 100  
C 200 CONTINUE  
C REWIND 10  
C CALL THREE SUBROUTINES TO: 1. CONSOLIDATE SMALL PARCEL SHIPPING  
C UNITS AND FREIGHT SHIPPING UNITS. 2. CONSOLIDATE SMALL PARCEL  
C SHIPPING UNITS BY DODAC. 3. WRITE FREIGHT SHIPPING UNITS TO  
C AN EXTERNAL FILE FOR FURTHER CONSOLIDATION.  
C IF (KTR .GT. 0) THEN  
C CALL SUN(PP,PARA,PWTGT,KI,FR,FAREA,MDATE)  
C CALL PSHIP(PP,PARA,PWTGT,DEPOT)  
C CALL FSHIP(FR,FAREA,FWTGT,MDATE,DEPOT)  
C KTR=0  
C END IF  
C REWIND 9  
C REPEAT THE SAME PROCESS FOR GEOGRAPHICAL AREA B. ETC.  
C 101 CONTINUE  
C 101 READ(9,1000,END=201)GA,DCR,DODAC,CC,SRC,RECDE,WT  
C IF (GA, EQ, 'B') THEN  
C KTR=KTR+1  
C 201 WRITE (10, 1001)GA,DCR,DODAC,CC,SRC,RECDE,WT  
C END IF  
C 201 GO TO 101  
C 201 CONTINUE  
C REWIND 10  
18 ISN 18  
19 ISN 19  
20 ISN 20  
21 ISN 21  
22 ISN 22  
23 ISN 23  
24 ISN 24  
25 ISN 25  
26 ISN 26  
27 ISN 27  
28 ISN 28  
29 ISN 29  
30 ISN 30  
31 ISN 31  
32 ISN 32  
33 ISN 33  
34 ISN 34
```

1.....2.....3.....4.....5.....6.....7.....8.....  
35 IF (KTR .GT. 0) THEN  
36 CALL SUN(PP,PAREA,PWGT,KD,FR,FAREA,FWGT,MDATE)  
37 CALL PSHIP(PP,PAREA,PWGT,DEPOT)  
38 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)  
39 KTR=0  
40 END IF  
41 REWIND 9  
42 CONTINUE  
43 READ(9,1000,END=202)GA,DCR,DODAC,CC,SRC,RECDE,WT  
44 IF (GA.EQ.'C') THEN  
45 KTR=KTR+1  
46 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT  
47 END IF  
48 GO TO 102  
49 CONTINUE  
50 REWIND 10  
51 IF (KTR .GT. 0) THEN  
52 CALL SUN(PP,PAREA,PWGT,KD,FR,FAREA,FWGT,MDATE)  
53 CALL PSHIP(PP,PAREA,PWGT,DEPOT)  
54 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)  
55 KTR=0  
56 END IF  
57 REWIND 9  
58 103 CONTINUE  
59 READ(9,1000,END=203)GA,DCR,DODAC,CC,SRC,RECDE,WT  
60 IF (GA.EQ.'D') THEN  
61 KTR=KTR+1  
62 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT  
63 END IF  
64 GO TO 103  
65 203 CONTINUE  
66 REWIND 10  
67 IF (KTR .GT. 0) THEN  
68 CALL SUN(PP,PAREA,PWGT,KD,FR,FAREA,FWGT,MDATE)  
69 CALL PSHIP(PP,PAREA,PWGT,DEPOT)  
70 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)  
71 KTR=0  
72 END IF  
73 REWIND 9  
74 104 CONTINUE  
75 READ(9,1000,END=204)GA,DCR,DODAC,CC,SRC,RECDE,WT  
76 IF (GA.EQ.'E') THEN  
77 KTR=KTR+1  
78 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT  
79 END IF  
80 GO TO 104  
81 204 CONTINUE  
82 REWIND 10  
83 IF (KTR .GT. 0) THEN  
84 CALL SUN(PP,PAREA,PWGT,KD,FR,FAREA,FWGT,MDATE)  
85 CALL PSHIP(PP,PAREA,PWGT,DEPOT)  
86 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)  
87 KTR=0  
88 END IF  
89 REWIND 9  
90 105 CONTINUE

LEVEL 1.3.0 (MAY 1983) VS FORTRAN DATE: OCT 28, 1988 TIME: 08:56:23 NAME: MAIN PAGE: 3

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  * . . . . 1 . . . . 2 . . . . 3 . . . . 4 . . . . 5 . . . . 6 . . . . 7 * . . . . 8

  91      READ(9,1000,END=205)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  92      IF (GA.EQ.'F') THEN
  93          KTR=KTR+1
  94          WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  95          END IF
  96          GO TO 108
  97      205  CONTINUE
  98      REWIND 10
  99      IF (KTR.GT.0) THEN
     CALL SUN(PP,PAREA,PWGT,KF,FAREA,FWGTF,MDATE)
     CALL PSHIP(PP,PAREA,PWGT,DEPOT)
     CALL FSHIP(FR,FAREA,FWGTF,MDATE,DEPOT)
  103      KTR=0
  104      END IF
  105      REWIND 9
  106  CONTINUE
  107      READ(9,1000,END=206)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  108      IF (GA.EQ.'G') THEN
  109          KTR=KTR+1
  110          WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  111          END IF
  112          GO TO 106
  113      206  CONTINUE
  114      REWIND 10
  115      IF (KTR.GT.0) THEN
     CALL SUN(PP,PAREA,PWGT,KG,FRE,FWGTF,MDATE)
     CALL PSHIP(PP,PAREA,PWGT,DEPOT)
     CALL FSHIP(FR,FAREA,FWGTF,MDATE,DEPOT)
  118      KTR=0
  119
  120      END IF
  121      REWIND 9
  122      107  CONTINUE
  123      READ(9,1000,END=207)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  124      IF (GA.EQ.'H') THEN
  125          KTR=KTR+1
  126          WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  127          END IF
  128          GO TO 107
  129      207  CONTINUE
  130      REWIND 10
  131      IF (KTR.GT.0) THEN
     CALL SUN(PP,PAREA,PWGT,KH,FRF,FWGTF,MDATE)
     CALL PSHIP(PP,PAREA,PWGT,DEPOT)
     CALL FSHIP(FR,FAREA,FWGTF,MDATE,DEPOT)
  135      KTR=0
  136      END IF
  137      REWIND 9
  138      108  CONTINUE
  139      READ(9,1000,END=208)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  140      IF (GA.EQ.'I') THEN
  141          KTR=KTR+1
  142          WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  143          END IF
  144          GO TO 108
  145      208  CONTINUE
  146      REWIND 10
  
```

```

      * * * * * 1.....2.....3.....4.....5.....6.....7.....8
      * * * * * IF (KTR.GT.0) THEN          01640061
      * * * * *   CALL SUN(PP,PAREA,PWGT,KI,FR,FAREA,FWGT,MDATE) 01650061
      * * * * *   CALL PSHIP(PP,PAREA,PWGT,DEPOT)           01660061
      * * * * *   CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)       01670061
      * * * * *   KTR=0                                01680061
      * * * * * END IF
      * * * * * REWIND 9
      * * * * 163  CONTINUE
      * * * * 154  READ(9,1000,END=209)GA,DCR,DODAC,CC,SRC,RECDE,WT
      * * * * 155  IF (GA.EQ.'J') THEN          01720061
      * * * *   KTR=KTR+1
      * * * *   WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT
      * * * * 156  END IF
      * * * *   GO TO 109
      * * * * 209  CONTINUE
      * * * * 161  REWIND 10
      * * * * 162  IF (KTR.GT.0) THEN          01790061
      * * * *   CALL SUN(PP,PAREA,PWGT,KU,FR,FAREA,FWGT,MDATE) 01800061
      * * * *   CALL PSHIP(PP,PAREA,PWGT,DEPOT)
      * * * *   CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      * * * *   KTR=0
      * * * * 167  END IF
      * * * * 168  REWIND 9
      * * * * 169  IF (KTR.GT.0) THEN          01840061
      * * * *   READ(9,1000,END=210)GA,DCR,DODAC,CC,SRC,RECDE,WT
      * * * *   IF (GA.EQ.'K') THEN          01850061
      * * * *     KTR=KTR+1
      * * * *     WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT
      * * * * 170  END IF
      * * * * 171  GO TO 110
      * * * * 172  CONTINUE
      * * * * 173  REWIND 10
      * * * * 174  IF (KTR.GT.0) THEN          01920061
      * * * *   CALL SUN(PP,PAREA,PWGT,KK,FR,FAREA,FWGT,MDATE) 01930061
      * * * *   CALL PSHIP(PP,PAREA,PWGT,DEPOT)
      * * * *   CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      * * * *   KTR=0
      * * * * 175  END IF
      * * * * 176  REWIND 9
      * * * * 177  CONTINUE
      * * * * 178  REWIND 10
      * * * * 179  IF (KTR.GT.0) THEN          01940061
      * * * *   CALL SUN(PP,PAREA,PWGT,KL,FR,FAREA,FWGT,MDATE) 01950061
      * * * *   CALL PSHIP(PP,PAREA,PWGT,DEPOT)
      * * * *   CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      * * * *   KTR=0
      * * * * 180  END IF
      * * * * 181  GO TO 111
      * * * * 182  CONTINUE
      * * * * 183  REWIND 9
      * * * * 184  CONTINUE
      * * * * 185  REWIND 9
      * * * * 186  CONTINUE
      * * * * 187  READ(9,1000,END=211)GA,DCR,DODAC,CC,SRC,RECDE,WT
      * * * * 188  IF (GA.EQ.'L') THEN          02040061
      * * * *   KTR=KTR+1
      * * * *   WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT
      * * * * 189  END IF
      * * * * 190  GO TO 111
      * * * * 191  CONTINUE
      * * * * 192  REWIND 10
      * * * * 211  CONTINUE
      * * * * 193  IF (KTR.GT.0) THEN          02120061
      * * * *   CALL SUN(PP,PAREA,PWGT,KL,FR,FAREA,FWGT,MDATE) 02130061
      * * * *   CALL PSHIP(PP,PAREA,PWGT,DEPOT)
      * * * *   CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      * * * *   KTR=0
      * * * * 194  CONTINUE
      * * * * 195  REWIND 10
      * * * * 196  CONTINUE
      * * * * 197  REWIND 9
      * * * * 200  CONTINUE
      * * * * 201  REWIND 9
      * * * * 202  CONTINUE

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* * * * *      1.....2.....3.....4.....5.....6.....7.....8
      READ(9,1000,END=212)GA,DCR,DODAC,CC,SRC,RECDTE,WT          0220006
      IF (GA.EQ.'W') THEN                                         0221006
        KTR=KTR+1
        WRITE ((10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          0222006
      END IF
      GO TO 112
      212 CONTINUE
      REWIND 10
      IF (KTR.GT.0) THEN
        CALL SUN(PP,PAREA,PWGT,KM,FR,FAREA,FWGT,MDATE)          0223006
        CALL PSHIP(PP,PAREA,PWGT,DEPOT)
      214 CALL PSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      215 KTR=0
      END IF
      REWIND 9
      217 113 CONTINUE
      ISN 218 READ(9,1000,END=213)GA,DCR,DODAC,CC,SRC,RECDTE,WT          0235006
      ISN 219 IF (GA.EQ.'N') THEN                                         0237006
        KTR=KTR+1
        WRITE ((10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          0238006
      END IF
      GO TO 113
      223 213 CONTINUE
      REWIND 10
      IF (KTR.GT.0) THEN
        CALL SUN(PP,PAREA,PWGT,KN,FR,FAREA,FWGT,MDATE)          0243006
        CALL PSHIP(PP,PAREA,PWGT,DEPOT)
      225 CALL PSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      226 KTR=0
      END IF
      REWIND 9
      232 214 CONTINUE
      ISN 233 READ(9,1000,END=214)GA,DCR,DODAC,CC,SRC,RECDTE,WT          0252006
      ISN 234 IF (GA.EQ.'O') THEN                                         0253006
        KTR=KTR+1
        WRITE ((10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          0254006
      END IF
      GO TO 114
      240 214 CONTINUE
      REWIND 10
      IF (KTR.GT.0) THEN
        CALL SUN(PP,PAREA,PWGT,KO,FR,FAREA,FWGT,MDATE)          0261006
        CALL PSHIP(PP,PAREA,PWGT,DEPOT)
      244 CALL PSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      245 KTR=0
      END IF
      REWIND 9
      247 215 CONTINUE
      ISN 248 READ(9,1000,END=215)GA,DCR,DODAC,CC,SRC,RECDTE,WT          0265006
      ISN 249 IF (GA.EQ.'P') THEN                                         0266006
        KTR=KTR+1
        WRITE ((10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          0267006
      END IF
      GO TO 115
      256 215 CONTINUE
      REWIND 10
      ISN 257
      ISN 258
    
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* * * * * 1 ..... 2 ..... 3 ..... 4 ..... 5 ..... 6 ..... 7 * ..... 8

      IF (KTR.GT.0) THEN          02780061
        CALL SUN(PP,PAREA,PWGT,KP,FR,FAREA,FWGT,MDATE) 02770061
        CALL PSHIP(PP,PAREA,PWGT,DEPOT) 02780061
        CALL PSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 02790061
      KTR=0 02800061
      END IF 02810061
      REWIND 9 02820061
      116 CONTINUE 02830061
      READ(9,1000,END=216)GA,DCR,DODAC,CC,SRC,RECDTE,WT
      IF (GA.EQ.'Q') THEN 02840061
        KTR=KTR+1 02850061
        WRITE (116,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 02860061
      END IF 02870061
      GO TO 116 02880061
      216 CONTINUE 02890061
      ISN 273 02900061
      ISN 274 REWIND 10 02910061
      IF (KTR.GT.0) THEN 02920061
        CALL SUN(PP,PAREA,PWGT,KO,FR,FAREA,FWGT,MDATE) 02930061
        CALL PSHIP(PP,PAREA,PWGT,DEPOT) 02940061
        CALL PSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 02950061
      KTR=0 02960061
      END IF 02970061
      REWIND 9 02980061
      117 CONTINUE 02990061
      READ(9,1000,END=217)GA,DCR,DODAC,CC,SRC,RECDTE,WT
      IF (GA.EQ.'R') THEN 03000061
        KTR=KTR+1 03010061
        WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 03020061
      END IF 03030061
      GO TO 117 03040061
      217 CONTINUE 03050061
      ISN 280 REWIND 10 03060061
      IF (KTR.GT.0) THEN 03070061
        CALL SUN(PP,PAREA,PWGT,KR,FR,FAREA,FWGT,MDATE) 03080061
        CALL PSHIP(PP,PAREA,PWGT,DEPOT) 03090061
        CALL PSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 03100061
      KTR=0 03110061
      END IF 03120061
      REWIND 9 03130061
      ISN 281 03140061
      ISN 282 118 CONTINUE 03150061
      ISN 283 READ(9,1000,END=218)GA,DCR,DODAC,CC,SRC,RECDTE,WT
      ISN 284 IF (GA.EQ.'S') THEN 03160061
      ISN 285 KTR=KTR+1 03170061
      ISN 286 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 03180061
      ISN 287 END IF 03190061
      ISN 288 GO TO 117 03200061
      ISN 289 218 CONTINUE 03210061
      ISN 290 REWIND 10 03220061
      ISN 291 IF (KTR.GT.0) THEN 03230061
        CALL SUN(PP,PAREA,PWGT,KR,FR,FAREA,FWGT,MDATE) 03240061
        CALL PSHIP(PP,PAREA,PWGT,DEPOT) 03250061
        CALL PSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 03260061
      KTR=0 03270061
      END IF 03280061
      REWIND 9 03290061
      ISN 292 118 CONTINUE 03300061
      ISN 293 READ(9,1000,END=219)GA,DCR,DODAC,CC,SRC,RECDTE,WT
      ISN 294 IF (GA.EQ.'T') THEN 03310061
      ISN 295 KTR=KTR+1 03320061
      ISN 296 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 03330061
      ISN 297 END IF 03340061
      ISN 298 GO TO 118 03350061
      ISN 299 218 CONTINUE 03360061
      ISN 300 IF (KTR.GT.0) THEN 03370061
      ISN 301 KTR=KTR+1 03380061
      ISN 302 WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT 03390061
      ISN 303 END IF 03400061
      ISN 304 GO TO 118 03410061
      ISN 305 218 CONTINUE 03420061
      ISN 306 IF (KTR.GT.0) THEN 03430061
        CALL SUN(PP,PAREA,PWGT,KS,FR,FAREA,FWGT,MDATE) 03440061
        CALL PSHIP(PP,PAREA,PWGT,DEPOT) 03450061
        CALL PSHIP(FR,FAREA,FWGT,MDATE,DEPOT) 03460061
      KTR=0 03470061
      END IF 03480061
      REWIND 9 03490061
      ISN 312 GO TO 118 03500061
      ISN 313 218 CONTINUE 03510061
      ISN 314 END IF 03520061
      REWIND 9 03530061
      ISN 315 118 CONTINUE 03540061
    
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      *   1.....2.....3.....4.....5.....6.....7.*     8
      READ(9,1000,END=219)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03320061
      IF (GA.EQ.'T') THEN                                         03330061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03340061
      END IF
      GO TO 118
      219 CONTINUE
      REWIND 10
      IF (KTR.GT.0) THEN
      CALL SUN(PP,PAREA,PWGT,KT,FR,FAREA,FWGT,MDATE)        03350061
      CALL PSHIP(PP,PAREA,PWGT,DEPOT)                         03360061
      CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      KTR=0
      END IF
      REWIND 9
      120 CONTINUE
      READ(9,1000,END=220)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03400061
      IF (GA.EQ.'U') THEN                                         03410061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03420061
      END IF
      GO TO 120
      220 CONTINUE
      REWIND 10
      IF (KTR.GT.0) THEN
      CALL SUN(PP,PAREA,PWGT,KU,FR,FAREA,FWGT,MDATE)        03430061
      CALL PSHIP(PP,PAREA,PWGT,DEPOT)                         03440061
      CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      KTR=0
      END IF
      REWIND 9
      121 CONTINUE
      READ(9,1000,END=221)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03450061
      IF (GA.EQ.'V') THEN                                         03460061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03470061
      END IF
      GO TO 121
      221 CONTINUE
      REWIND 10
      IF (KTR.GT.0) THEN
      CALL SUN(PP,PAREA,PWGT,KV,FR,FAREA,FWGT,MDATE)        03480061
      CALL PSHIP(PP,PAREA,PWGT,DEPOT)                         03490061
      CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      KTR=0
      END IF
      REWIND 9
      122 CONTINUE
      READ(9,1000,END=222)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03500061
      IF (GA.EQ.'W') THEN                                         03510061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03520061
      END IF
      GO TO 122
      222 CONTINUE
      REWIND 10
      IF (KTR.GT.0) THEN
      CALL SUN(PP,PAREA,PWGT,KW,FR,FAREA,FWGT,MDATE)        03530061
      CALL PSHIP(PP,PAREA,PWGT,DEPOT)                         03540061
      CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      KTR=0
      END IF
      REWIND 9
      361 CONTINUE
      READ(9,1000,END=362)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03550061
      IF (GA.EQ.'W') THEN                                         03560061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03570061
      END IF
      GO TO 361
      362 CONTINUE
      READ(9,1000,END=363)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03580061
      IF (GA.EQ.'W') THEN                                         03590061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03600061
      END IF
      GO TO 362
      363 CONTINUE
      READ(9,1000,END=364)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03610061
      IF (GA.EQ.'W') THEN                                         03620061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03630061
      END IF
      GO TO 363
      364 CONTINUE
      READ(9,1000,END=365)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03640061
      IF (GA.EQ.'W') THEN                                         03650061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03660061
      END IF
      GO TO 365
      365 CONTINUE
      READ(9,1000,END=366)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03670061
      IF (GA.EQ.'W') THEN                                         03680061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03690061
      END IF
      GO TO 366
      366 CONTINUE
      READ(9,1000,END=367)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03700061
      IF (GA.EQ.'W') THEN                                         03710061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03720061
      END IF
      GO TO 367
      367 CONTINUE
      READ(9,1000,END=368)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03730061
      IF (GA.EQ.'W') THEN                                         03740061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03750061
      END IF
      GO TO 368
      368 CONTINUE
      READ(9,1000,END=369)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03760061
      IF (GA.EQ.'W') THEN                                         03770061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03780061
      END IF
      GO TO 369
      369 CONTINUE
      READ(9,1000,END=370)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03790061
      IF (GA.EQ.'W') THEN                                         03800061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03810061
      END IF
      GO TO 370
      370 CONTINUE
      READ(9,1000,END=371)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03820061
      IF (GA.EQ.'W') THEN                                         03830061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03840061
      END IF
      GO TO 371
      371 CONTINUE
      READ(9,1000,END=372)GA,DCR,DODAC,CC,SRC,RECDTE,WT    03850061
      IF (GA.EQ.'W') THEN                                         03860061
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT          03870061
      END IF

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* * * * * 1 ..... 2 ..... 3 ..... 4 ..... 5 ..... 6 ..... 7 * ..... 8
      IF (KTR.GT.0) THEN
        CALL SUN(PP,PAREA,PWGT,KY,FR,FAREA,FWGT,MDATE)
        CALL PSHIP(PP,PAREA,PWGT,DEPOT)
        CALL PSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      KTR=0
    END IF
    REWIND 9
  377  123 CONTINUE
  ISN  378  READ(9,1000,END=223)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  ISN  379  IF (GA.EQ.'X') THEN
  ISN  380  WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  ISN  381  KTR=KTR+1
  ISN  382  END IF
  ISN  383  GO TO 123
  ISN  384  223 CONTINUE
  ISN  385  223 CONTINUE
  ISN  386  REWIND 10
  ISN  387  IF (KTR.GT.0) THEN
    CALL SUN(PP,PAREA,PWGT,KY,FR,FAREA,FWGT,MDATE)
    CALL PSHIP(PP,PAREA,PWGT,DEPOT)
    CALL PSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
  KTR=0
  END IF
  REWIND 9
  ISN  393  124 CONTINUE
  ISN  394  READ(9,1000,END=224)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  ISN  395  IF (GA.EQ.'Y') THEN
  ISN  396  WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  ISN  397  KTR=KTR+1
  ISN  398  END IF
  ISN  399  END IF
  ISN  400  GO TO 224
  ISN  401  224 CONTINUE
  ISN  402  REWIND 10
  ISN  403  IF (KTR.GT.0) THEN
    CALL SUN(PP,PAREA,PWGT,KY,FR,FAREA,FWGT,MDATE)
    CALL PSHIP(PP,PAREA,PWGT,DEPOT)
    CALL PSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
  KTR=0
  END IF
  REWIND 9
  ISN  409  125 CONTINUE
  ISN  410  READ(9,1000,END=225)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  ISN  411  IF (GA.EQ.'Z') THEN
  ISN  412  KTR=KTR+1
  ISN  413  WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDTE,WT
  ISN  414  END IF
  ISN  415  GO TO 125
  ISN  416  225 CONTINUE
  ISN  417  REWIND 10
  ISN  418  IF (KTR.GT.0) THEN
    CALL SUN(PP,PAREA,PWGT,KY,FR,FAREA,FWGT,MDATE)
    CALL PSHIP(PP,PAREA,PWGT,DEPOT)
    CALL PSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
  KTR=0
  END IF
  REWIND 9
  ISN  424  226 CONTINUE
  ISN  425  REWIND 9
  ISN  426  226 CONTINUE

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      * . . . . 1 . . . . 2 . . . . 3 . . . . 4 . . . . 5 . . . . 6 . . . . 7 . . . . 8
      READ(9,1000,END=226)GA,DCR,DODAC,CC,SRC,RECDE,WT          044006
      IF (GA.EQ.'1') THEN                                         0445006
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT            0446006
      END IF
      GO TO 126
      226 CONTINUE
      ISN 434 REWIND 10
      IF (KTR.GT.0) THEN
        CALL SUN(PP,PAREA,PWGT,K1,FR,FAREA,FWGT,MDATE)       0448006
      END IF
      ISN 435 READ(9,1000,END=227)GA,DCR,DODAC,CC,SRC,RECDE,WT 0452006
      ISN 436 CALL PSHIP(PP,PAREA,PWGT,DEPOT)                  0454006
      ISN 437 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)           0458006
      ISN 438 KTR=0
      ISN 439
      ISN 440
      ISN 441 REWIND 9
      ISN 442 CONTINUE
      ISN 443 READ(9,1000,END=227)GA,DCR,DODAC,CC,SRC,RECDE,WT 0460006
      ISN 444 IF (GA.EQ.'2') THEN
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT            0461006
      END IF
      ISN 445 GO TO 127
      127 CONTINUE
      ISN 446 READ(9,1000,END=227)GA,DCR,DODAC,CC,SRC,RECDE,WT 0462006
      ISN 447 IF (KTR.GT.0) THEN
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT            0463006
      END IF
      ISN 448 GO TO 127
      127 CONTINUE
      ISN 449 REWIND 10
      ISN 450 IF (KTR.GT.0) THEN
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT            0464006
      END IF
      ISN 451 READ(9,1000,END=228)GA,DCR,DODAC,CC,SRC,RECDE,WT 0465006
      ISN 452 CALL SUN(PP,PAREA,PWGT,K2,FR,FAREA,FWGT,MDATE) 0466006
      ISN 453 CALL PSHIP(PP,PAREA,PWGT,DEPOT)                  0467006
      ISN 454 CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)           0468006
      ISN 455 KTR=0
      ISN 456
      ISN 457 REWIND 9
      ISN 458 CONTINUE
      ISN 459 READ(9,1000,END=228)GA,DCR,DODAC,CC,SRC,RECDE,WT 0472006
      ISN 460 IF (GA.EQ.'3') THEN
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT            0473006
      END IF
      ISN 461 GO TO 128
      128 CONTINUE
      ISN 462 READ(9,1000,END=228)GA,DCR,DODAC,CC,SRC,RECDE,WT 0476006
      ISN 463 IF (KTR.GT.0) THEN
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT            0478006
      END IF
      ISN 464 GO TO 128
      128 CONTINUE
      ISN 465 REWIND 10
      ISN 466 IF (KTR.GT.0) THEN
      KTR=KTR+1
      CALL SUN(PP,PAREA,PWGT,K3,FR,FAREA,FWGT,MDATE)       0479006
      CALL PSHIP(PP,PAREA,PWGT,DEPOT)                      0480006
      CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)                0481006
      ISN 470 KTR=0
      ISN 471
      ISN 472 IF (KTR.GT.0) THEN
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT            0482006
      END IF
      ISN 473 REWIND 9
      ISN 474 CONTINUE
      ISN 475 READ(9,1000,END=229)GA,DCR,DODAC,CC,SRC,RECDE,WT 0483006
      ISN 476 IF (GA.EQ.'4') THEN
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT            0484006
      END IF
      ISN 477 GO TO 129
      129 CONTINUE
      ISN 478 READ(9,1000,END=229)GA,DCR,DODAC,CC,SRC,RECDE,WT 0485006
      ISN 479 IF (KTR.GT.0) THEN
      KTR=KTR+1
      WRITE (10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT            0486006
      END IF
      ISN 480 GO TO 129
      129 CONTINUE
      ISN 481 READ(9,1000,END=229)GA,DCR,DODAC,CC,SRC,RECDE,WT 0487006
      ISN 482 REWIND 10
      ISN 483
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      * . . . . 1 . . . . 2 . . . . 3 . . . . 4 . . . . 5 . . . . 6 . . . . 7 . . . . 8
      * . . . . 1 . . . . 2 . . . . 3 . . . . 4 . . . . 5 . . . . 6 . . . . 7 . . . . 8

 483   IF (KTR.GT.0) THEN          05000061
 484     CALL SUN(PP,PAREA,PWGT,K4,FR,FAREA,FWGT,MDATE) 05010061
 485     CALL PSHIP(PP,PAREA,PWGT,DEPOT)
 486     CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
 487     KTR=0
 488   END IF
 489   REWIND 9
 490   130 CONTINUE
 491   READ(9,1000,END=230)GA,DCR,DODAC,CC,SRC,RECDE,WT
 492   IF (GA.EQ.'5') THEN
 493     KTR=KTR+1
 494     WRITE(1,101)GA,DCR,DODAC,CC,SRC,RECDE,WT
 495   END IF
 496   GO TO 130
 497   230 CONTINUE
 498   REWIND 10
 499   IF (KTR.GT.0) THEN
 500     CALL SUN(PP,PAREA,PWGT,K5,FR,FAREA,FWGT,MDATE)
 501     CALL PSHIP(PP,PAREA,PWGT,DEPOT)
 502     CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
 503     KTR=0
 504   END IF
 505   REWIND 9
 506   131 CONTINUE
 507   READ(9,1000,END=231)GA,DCR,DODAC,CC,SRC,RECDE,WT
 508   IF (GA.EQ.'6') THEN
 509   END IF
 510   WRITE(10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT
 511   512   231 CONTINUE
 513   REWIND 10
 514   IF (KTR.GT.0) THEN
 515     CALL SUN(PP,PAREA,PWGT,K6,FR,FAREA,FWGT,MDATE)
 516     CALL PSHIP(PP,PAREA,PWGT,DEPOT)
 517     CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
 518   KTR=0
 519   END IF
 520   REWIND 9
 521   132 CONTINUE
 522   READ(9,1000,END=232)GA,DCR,DODAC,CC,SRC,RECDE,WT
 523   IF (GA.EQ.'7') THEN
 524     KTR=KTR+1
 525     CALL PSHIP(PP,PAREA,PWGT,K7,FR,FAREA,FWGT,MDATE)
 526     WRITE(10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT
 527   END IF
 528   GO TO 132
 529   232 CONTINUE
 530   REWIND 10
 531   IF (KTR.GT.0) THEN
 532     CALL SUN(PP,PAREA,PWGT,K7,FR,FAREA,FWGT,MDATE)
 533     CALL PSHIP(PP,PAREA,PWGT,DEPOT)
 534     CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
 535   KTR=0
 536   END IF
 537   REWIND 9
 538   133 CONTINUE

```

LEVEL 1.3.O (MAY 1983) VS FORTRAN DATE: OCT 28, 1988 TIME: 08:56:23 NAME: MAIN PAGE: 11

```
* * * * * 1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 . . . . . 7 . . . . . 8 .
      READ(9,1000,END=233)GA,DCR,DODAC,CC,SRC,RECDE,WT
      IF(GA.EQ.'8') THEN
        KTR=KTR+1
        WRITE(10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT
      END IF
      ISN 544      GO TO 133
      ISN 545      233 CONTINUE
      ISN 546      REWIND 10
      ISN 547      IF (KTR.GT.0) THEN
                    CALL SUN(PP,PAREA,PWGT,KB,FR,FAREA,FWGT,MDATE)
                    CALL PSHIP(PP,PAREA,PWGT,DEPOT)
      ISN 548      CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      ISN 549      KTR=0
      ISN 550      END IF
      ISN 551      REWIND 9
      ISN 552      134 CONTINUE
      ISN 553      READ(9,1000,END=234)GA,DCR,DODAC,CC,SRC,RECDE,WT
      ISN 554      IF(GA.EQ.'9') THEN
        KTR=KTR+1
        WRITE(10,1001)GA,DCR,DODAC,CC,SRC,RECDE,WT
      END IF
      ISN 555      GO TO 134
      ISN 556      234 CONTINUE
      ISN 557      REWIND 10
      ISN 558      IF (KTR.GT.0) THEN
                    CALL SUN(PP,PAREA,PWGT,X9,FR,FAREA,FWGT,MDATE)
                    CALL PSHIP(PP,PAREA,PWGT,DEPOT)
      ISN 559      CALL FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
      ISN 560      KTR=0
      ISN 561      END IF
      ISN 562      STOP
      ISN 563      END IF
      ISN 564      ISN 565      ISN 566      ISN 567      ISN 568      ISN 569      ISN 570
      ISN 560      ISN 561      ISN 562      ISN 563      ISN 564      ISN 565      ISN 566      ISN 567      ISN 568      ISN 569      ISN 570
      ISN 561      ISN 562      ISN 563      ISN 564      ISN 565      ISN 566      ISN 567      ISN 568      ISN 569      ISN 570
      ISN 562      ISN 563      ISN 564      ISN 565      ISN 566      ISN 567      ISN 568      ISN 569      ISN 570
      ISN 563      ISN 564      ISN 565      ISN 566      ISN 567      ISN 568      ISN 569      ISN 570
      ISN 564      ISN 565      ISN 566      ISN 567      ISN 568      ISN 569      ISN 570
      ISN 565      ISN 566      ISN 567      ISN 568      ISN 569      ISN 570
      ISN 566      ISN 567      ISN 568      ISN 569      ISN 570
      ISN 567      ISN 568      ISN 569      ISN 570
      ISN 568      ISN 569      ISN 570
      ISN 569      ISN 570
      ISN 570
```

\*STATISTICS\*

\*STATISTICS\* SOURCE STATEMENTS = 570. PROGRAM SIZE = 751884 BYTES. PROGRAM NAME = MAIN PAGE: 1.

\*\*\*\*\* END OF COMPILEATION 1 \*\*\*\*

LEVEL 1.3.0 (MAY 1983)

DATE: OCT 28, 1988

PAGE: 12

OPTIONS IN EFFECT: NOLIST NOXREF NOGOSTMT NODECK SOURCE TERM OBJECT FIXED NOTEST NOTRMFLG SRCFLG NOSYM  
OPT(O) LANGLYL(77) NOFIPS FLAG(I) NAME(MAIN) LINECOUNT(60) CHARLEN(500) SDUMP

C SUBROUTINE SUN(PP,PAREA,PWGT,KK,FR,FAREA,FWGT,MDATE)  
C AND FREIGHT ACCORDING TO THE FOLLOWING: SIMILAR GEOGRAPHICAL  
C AREA SIMILAR DODAAC SIMILAR CARGO CODE SIMILAR SPECIAL  
C REQUIREMENTS CODE AND WITHIN THE MDT OF THE OLDEST MDT.  
C

ISN 1 SUBROUTINE SUN(PP,PAREA,PWGT,KK,FR,FAREA,FWGT,MDATE)  
ISN 2 INTEGER RDATE(10000),PP,FR,RECDTE,TDATE,MDATE(10000),  
ISN 3 PCTR(10000),FCTR(10000)  
ISN 4 REAL PWGT(10000),WT(SUMWGT)  
ISN 5 CHARACTER\*1 GA,TGA,CC,TCC,SRC,TSRC  
ISN 6 CHARACTER\*6 PAREA(10000,5),FAREA(10000,5),DODAC,TDCR,DODAC,  
ISN 7 TDDAAC  
ISN 8 PP=0  
ISN 9 CTR=0  
ISN 10 FR=0  
ISN 11 READ (10,1000)GA,DCR,DODAC,CC,SRC,RECDTE,WT  
ISN 12 1000 FORMAT (A,2X,A6,1X,A6,2(1X,A).1X,13,1X,F9.3)  
ISN 13 TDCR=DCR  
ISN 14 TDDAAC=DODAC  
ISN 15 TSRC=SRC  
ISN 16 TCC=CC  
ISN 17 DATE=RECDTE  
ISN 18 CTR=1  
ISN 19 SUMWGT=WT  
ISN 20 MDT=RECDTE+KK  
ISN 21 READ(10,1000,END=10)GA,DCR,DODAC,CC,SRC,RECDTE,WT  
ISN 22 IF (TDDAAC.EQ.DODAC.AND.TCC.EQ.CC.AND.TSRC.EQ.SRC.AND.  
ISN 23 RECDTE.LE.MDT) THEN  
ISN 24 SUMWGT=SUMWGT+WT  
ISN 25 TGA=GA  
ISN 26 TDCR=DCR  
ISN 27 CTR=CTR+1  
ISN 28 TDDAAC=DODAC  
ISN 29 TCC=CC  
ISN 30 TSRC=SRC  
ISN 31 TDATE=RECDTE  
ISN 32 ELSE  
ISN 33 IF (SUMWGT.LE.70.000) THEN  
ISN 34 PP=PP+1  
ISN 35 PAREA(PP,1)=TGA  
ISN 36 PAREA(PP,2)=TDCR  
ISN 37 PAREA(PP,3)=TDDAAC  
ISN 38 PAREA(PP,4)=TCC  
ISN 39 PAREA(PP,5)=TSRC  
ISN 40 PCTR(PP)=CTR  
ISN 41 PWGT(PP)=SUMWGT  
ISN 42 ELSE  
ISN 43 FW=FR+1  
ISN 44 FAREA(FR,1)=TGA  
ISN 45 FAREA(FR,2)=TDCR

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LEVEL 1.3.0 (MAY 1983)

VS FORTRAN

DATE: OCT 28. 1988

NAME: SUN

PAGE: 13

```

        *.....* 1.....* 2.....* 3.....* 4.....* 5.....* 6.....* 7.....* 8
        *.....* 1.....* 2.....* 3.....* 4.....* 5.....* 6.....* 7.....* 8
ISN   45      FAREA(FR,3)=TDDAC          06410061
ISN   46      FAREA(FR,4)=TCC          06420061
ISN   47      FAREA(FR,5)=TSRC         06430061
ISN   48      FCTR(FR)=CTR           06440083
ISN   49      FWGT(FR)=SUMWGT        06450061
ISN   50      MDATE(FR)=MDT          06460061
ISN   51      END IF               06470061
ISN   52      TGA=GA               06480061
ISN   53      TDGR=DCR            06490061
ISN   54      CTR=1                06500085
ISN   55      TDDAC=DODAC          06510061
ISN   56      TCC=CC               06520061
ISN   57      TSRC=SRC             06530061
ISN   58      TDATE=RECDTE        06540061
ISN   59      SUMWGT=WT           06550061
ISN   60      MDT=RECDTE+KK        06560061
ISN   61      END IF               06570061
ISN   62      GO TO 100           06580061
ISN   63      101 CONTINUE         06590061
ISN   64      IF (SUMWGT.LE.70.000) THEN
ISN   65      PP=PP+1              06600061
ISN   66      PAREA(PP,1)=TGA          06620061
ISN   67      PAREA(PP,2)=TDGR        06630061
ISN   68      PAREA(PP,3)=TDDAC        06640061
ISN   69      PAREA(PP,4)=TCC          06650061
ISN   70      PAREA(PP,5)=TSRC         06660061
ISN   71      PCTR(PP)=CTR          06670083
ISN   72      PWGT(PP)=SUMWGT       06680061
ISN   73      ELSE
ISN   74      FR=FR+1              06690061
ISN   75      FAREA(FR,1)=TGA          06700061
ISN   76      FAREA(FR,2)=TDGR        06710061
ISN   77      FAREA(FR,3)=TDDAC        06720061
ISN   78      FAREA(FR,4)=TCC          06730061
ISN   79      FAREA(FR,5)=TSRC         06740061
ISN   80      FCTR(FR)=CTR           06750061
ISN   81      FWGT(FR)=SUMWGT        06760083
ISN   82      MDATE(FR)=MDT          06770061
ISN   83      END IF               06780061
ISN   84      REWIND 10            06800061
ISN   85      RETURN               06810061
ISN   86      END

```

\*STATISTICS\* SJRCE STATEMENTS = 86. PROGRAM SIZE # 85346 BYTES. PROGRAM NAME \* SUN PAGE: 12.

\*STATISTICS\* NO DIAGNOSTICS GENERATED.

\*\*\*\*\* END OF COMPILATION 2 \*\*\*\*\*

LEVEL 1.3.0 (MAY 1983)

VS FORTRAN

PAGE: 14

OPTIONS IN EFFECT: NOLIST NOMAP NOXREF NOGOSTMT NODECK  
OPT(O) LANGLV(77) NOFIPS FLAG(1) NAME(MAIN) LINECOUNT(60) CHARLEN(500) SRCFLG NOSYM  
SDUMP

\* \* \* \* \* .1.....2.....3.....4.....5.....6.....7.....8

```
C SUBROUTINE TO CONSOLIDATE SMALL PARCEL SHIPPING UNITS ACCORDING TO
C SAME DDAAC CALCULATES THE NUMBER OF SHIPPING UNITS, THE TOTAL
C WEIGHT AND THE AVERAGE WEIGHT.
C
C
ISN 1      SUBROUTINE PSHIP(PP,PAREA,PWGT,DEPOT)
ISN 2      INTEGER PP,PCTR(10000)
ISN 3      REAL PWGT(10000),SUMWT,AVGWT
ISN 4      CHARACTER*2 DEPOT
ISN 5      CHARACTER*6 PAREA(10000,5)
ISN 6      LINES=6
ISN 7      IF (PP.GT.0) THEN
ISN 8          SUMWT=PWGT(1)
ISN 9          NSU=1
ISN 10         DD 10 J=2,PP
ISN 11         IF (PAREA(J,3).EQ.PAREA(J-1,3)) THEN
ISN 12             NSU=NSU+1
ISN 13             SUMWT=SUMWT+PWGT(J)
ISN 14             IF (J.EQ.PP) THEN
ISN 15                 AVGWT=SUMWT/NSU
ISN 16                 WRITE (20,1001) PAREA(J-1,1),PAREA(J-1,3),NSU,
ISN 17                 $ PCTR(J-1),SUMWT,AvgWT
ISN 18                 LINES=LINES+1
ISN 19             END IF
ISN 20             AVGWT=SUMWT/NSU
ISN 21             IF (J.EQ.PP) THEN
ISN 22                 WRITE (20,1001) PAREA(J,1),PAREA(J,3),NSU,
ISN 23                 $ PCTR(J),SUMWT,AvgWT
ISN 24                 LINES=LINES+1
ISN 25             ELSE
ISN 26                 WRITE (20,1001) PAREA(J-1,1),PAREA(J-1,3),NSU,
ISN 27                 $ PCTR(J-1),SUMWT,AvgWT
ISN 28                 LINES=LINES+1
ISN 29                 FORMAT (A,5X,A6,7X,I3,2X,I6,F11.3,4X,F11.3)
ISN 30             END IF
ISN 31             END IF
ISN 32             10  CONTINUE
ISN 33             END IF
ISN 34             RETURN
ISN 35         END
```

\*STATISTICS\* SOURCE STATEMENTS = 35, PROGRAM SIZE = 42296 BYTES, PROGRAM NAME = PSHIP PAGE: 14.

\*STATISTICS\* NO DIAGNOSTICS GENERATED.

\*\*\*\*\* END OF COMPIRATION 3 \*\*\*\*\*

LEVEL 1 3.0 (MAY 1983)

VS FORTRAN

DATE: OCT 28, 1988

PAGE: 15

OPTIONS IN EFFECT: NOLIST NOMAP NOXREF NOGOSTMT NODECK SOURCE TERM OBJECT FIXED NOTEST NOTRMFLG SRCFLG NOSYM  
OPT(O) LANGLVL(77) NOFIPS FLAG(1) NAME(MAIN ) LINECOUNT(60) CHARLEN(800) DUMP

C SUBROUTINE TO WRITE THE FREIGHT SHIPPING UNITS TO AN EXTERNAL

C FILE FOR FURTHER CONSOLIDATION INTO TRANSPORTATION UNITS.

```
1      SUBROUTINE FSHIP(FR,FAREA,FWGT,MDATE,DEPOT)
2      INTEGER FR,MDATE(10000)
3      REAL FWGT(10000)
4      CHARACTER*2 DEPOT
5      CHARACTER*6 FAREA(10000,6)
6      IF (FR,GT,0) THEN
7          DO 10 J=1,FR
8              WRITE(16,1000) DEPOT,FAREA(J,1),FAREA(J,2),FAREA(J,3),
9                          FAREA(J,4),FAREA(J,5),FWGT(J),MDATE(J),FCTR(J),
10             FORMAT(A2,1X,A,1X,A6,1X,A6,1X,A,1X,A,1X,F9.3,1X,13,X,14)
11         END IF
12         RETURN
13     END
```

\*STATISTICS\* SOURCE STATEMENTS = 13, PROGRAM SIZE = 41192 BYTES, PROGRAM NAME = FSHIP PAGE: 15.

\*STATISTICS\* NO DIAGNOSTICS GENERATED.

\*\*\*\*\* END OF COMPILEATION 4 \*\*\*\*\*

REQUESTED OPTIONS (EXECUTE): NOTF, NODECK, NOLIST, OPT(O)

OPTIONS IN EFFECT: NOLIST NOMAP NOXREF NODECK  
OPT(O) LANGLVL(77) NOFIPS FLAG(I) NAME(MAIN) LINECOUNT(60) CHARLEN(500)  
SRCFLG NOSYM SDUMP

```

* * * * * 1      INTEGER MDT,TMDT,FR,INTL,NLT,L
* * * * * 2      REAL WT,SUMWT,TUWT(10000),SUMLTL,SUMTC,AVAILL
* * * * * 3      CHARACTER*1 GA,CC,SRC,TGA
* * * * * 4      CHARACTER*2 DEPOT
* * * * * 5      CHARACTER*6 DCR,TUNIT(10000,2),TDCR
* * * * * 6      C PROGRAM TO CONSOLIDATE FREIGHT SHIPPING UNITS INTO TRANSPORTATION
* * * * * 7      C UNITS
* * * * * 8      C
* * * * * 9      READ(9,1000) DEPOT,GA,DCR,CC,SRC,WT,MDT
* * * * * 10     1000 FORMAT(A2,1X,A6X,A6,8X,A6X,F9.3,1X,13)
* * * * * 11     TGA=GA
* * * * * 12     TDCR=DCR
* * * * * 13     TMDT=MDT
* * * * * 14     SUMWT=WT
* * * * * 15     FR=0
* * * * * 16     100 CONTINUE
* * * * * 17     READ(9,1000,END=200) DEPOT,GA,DCR,CC,SRC,WT,MDT
* * * * * 18     IF(TGA.EQ.GA.AND.TDCR.EQ.DCR.AND.TMDT.EQ.MDT) THEN
* * * * * 19     SUMWT=SUMWT+WT
* * * * * 20     ELSE
* * * * * 21     110  CONTINUE
* * * * * 22     IF(SUMWT.GT.30000.000) THEN
* * * * * 23     SUMWT=SUMWT-30000.000
* * * * * 24     FR=FR+1
* * * * * 25     TUNIT(FR,1)=TGA
* * * * * 26     TUNIT(FR,2)=TDCR
* * * * * 27     TUWT(FR)=30000.000
* * * * * 28     GO TO 110
* * * * * 29     ELSE
* * * * * 30     FR=FR+1
* * * * * 31     TUNIT(FR,1)=TGA
* * * * * 32     TUNIT(FR,2)=TDCR
* * * * * 33     TUWT(FR)=SUMWT
* * * * * 34     END IF
* * * * * 35     TGA=GA
* * * * * 36     TDCR=DCR
* * * * * 37     TMDT=MDT
* * * * * 38     SUMWT=WT
* * * * * 39     END IF
* * * * * 40     GO TO 100
* * * * * 41     200 CONTINUE
* * * * * 42     IF(SUMWT.GT.30000.000) THEN
* * * * * 43     SUMWT=SUMWT-30000.000
* * * * * 44     FR=FR+1
* * * * * 45     TUNIT(FR,1)=TGA
* * * * * 46     TUNIT(FR,2)=TDCR
* * * * * 47     TUWT(FR)=30000.000

```

LEVEL 1.3.0 (MAY 1983)

VS FORTRAN DATE: OCT 20, 1988 TIME: 09:57:17 NAME: MAIN PAGE: 2

```
48      DO 10 200
49      ELSE
50          FR=FR+1
51          TUNIT(FR,1)=TGA
52          TUNIT(FR,2)=TDCR
53          TUWT(FR)=SUMTL
54      END IF
55      LINES=5
56      FR=FR+1
57      TUNIT(FR,1)='
58      TUNIT(FR,2)='
59      TUWT(FR)=0
60      SUMTL=0
61      SUMTL=0
62      NLTL=0
63      NTL=0
64      IF (TUWT(1).LT.30000.000) THEN
65          SUMTL= TUWT(1)
66          NLTL=NLTLL+
67      ELSE
68          SUMTL=TUWT(1)
69          NTL=NTL+1
70      END IF
71      K=1
72      DO 10 J=2,FR
73          IF (TUNIT(J,1).EQ.TUNIT(J-1,1)) THEN
74              IF (TUNIT(J,2).EQ.TUNIT(J-1,2)) THEN
75                  IF (TUWT(J).LT.30000.000) THEN
76                      SUMTL=SUMTL+TUWT(J)
77                      NLTL=NLTLL+
78                  ELSE
79                      SUMTL=SUMTL+TUWT(J)
80                      NTL=NTL+1
81      END IF
82      ELSE
83          AVGTL=SUMML/NMLL
84          IF (LINES.EQ.55) THEN
85              LINES=5
86              K=J-1
87          END IF
88          IF (NTL.GT.0) THEN
89              WRITE(21,1001) TUNIT(J-1,1),TUNIT(J-1,2),NLTLL,
90              $                                SUMML,NTL,SUMTL,
91              $                                FORMAT(A6,3X,A6,2X,I3,2(4X,F11.3))
92          LINES=LINES+1
93          WRITE (21,1001) TUNIT(J-1,1),TUNIT(J-1,2),NLTLL,
94          $                                SUMML,AvgTL,NTL,SUMTL,
95          $                                LINES=LINES+1
96      END IF
97      SUMTL=0
98      NLTL=0
99      NLTL=0
100     IF (TUWT(J).LT.30000.000) THEN
101         SUMTL=TUWT(J)
00520010
00530010
00540010
00550010
00560010
00570010
00580010
00590020
00600018
00610018
00620018
00630018
00640011
00650011
00660011
00670011
00680011
00690011
00700011
00710011
00720011
00730011
00740011
00750020
00760011
00770011
00780012
00790011
00800011
00810011
00820011
00830011
00840011
00850011
00860011
00870011
00880020
00890020
00900020
00910020
00920019
00930049
00940049
00950049
00960020
00970019
00980055
00990055
01000020
01010019
01020011
01030011
01040011
01050011
01060016
01070016
```

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```

      *      *      *      *      *      *      *      *      *
      *      1      2      3      4      5      6      7      8
      *      *      *      *      *      *      *      *      *

102   ISN    102      NLTL=NLTL+1
103   ISN    103      ELSE
104   ISN    104      SUMTL=TUWT(J)
105   ISN    105      NTL=NTL+1
106   ISN    106      END IF
107   ISN    107      END IF
108   ISN    108      ELSE
109   ISN    109      IF (NTL.GT.0) THEN
110   ISN    110      WRITE(21,1001) TUNIT(J-1,1),TUNIT(J-1,2),NLTL,SUMTL,
111   ISN    111      $      LINES=LINES+1
112   ISN    112      ELSE
113   ISN    113      $      WRITE(21,1001) TUNIT(J-1,1),TUNIT(J-1,2),NLTL,SUMTL,
114   ISN    114      $      Available,NTL,SUMTL
115   ISN    115      LINES=LINES+1
116   ISN    116      END IF
117   ISN    117      SUMTL=0
118   ISN    118      SUMTL=0
119   ISN    119      NTL=0
120   ISN    120      NTL=0
121   ISN    121      IF (TUWT(J).LT.30000.000) THEN
122   ISN    122      SUMTL=TUWT(J)
123   ISN    123      NLTL=NLTL+1
124   ISN    124      ELSE
125   ISN    125      SUMTL=TUWT(J)
126   ISN    126      NLTL=NLTL+1
127   ISN    127      END IF
128   ISN    128      END IF
129   ISN    129      10 CONTINUE
130   ISN    130      STOP
131   ISN    131      END
      *      *      *      *      *      *      *      *      *

```

\*STATISTICS\* SOURCE STATEMENTS = 131. PROGRAM SIZE = 166702 BYTES. PROGRAM NAME = MAIN PAGE: 1.

\*STATISTICS\* NO DIAGNOSTICS GENERATED.

\*\*\*\*\* END OF COMPILED 1 \*\*\*\*\*

APPENDIX B

Sample Simulation Output Case

## DEFENSE DEPOT TRACY, CALIFORNIA

## ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
A	A	873270	060	C4461900	7	15192	\$312.29
		NUMBER OF GBL'S PER DCR	1		7	15192	
		SUBTOTAL				15192	
		AVERAGE WEIGHT					
B		712508	090	C4467607	3	212	\$21.20
		NUMBER OF GBL'S PER DCR	1		3	212	
		SUBTOTAL				212	
		AVERAGE WEIGHT					
Z13413		063		C4462776	1	13	\$20.00
		NUMBER OF GBL'S PER DCR	1		1	13	
		SUBTOTAL				13	
		AVERAGE WEIGHT					
Z13414		090		C4467683	1	204	\$20.40
		NUMBER OF GBL'S PER DCR	1		1	204	
		SUBTOTAL				204	
		AVERAGE WEIGHT					
Z20285		083		C4466490	1	111	\$20.00
		090		C4467611	4	438	\$29.40
		NUMBER OF GBL'S PER DCR	2		5	549	
		SUBTOTAL				275	
		AVERAGE WEIGHT					
Z36266		083		C4466491	1	318	\$29.94
		NUMBER OF GBL'S PER DCR	1		1	318	
		SUBTOTAL				318	
		AVERAGE WEIGHT					
149136		055		C4461120	1	87	\$20.00
		069		C4463723	1	40	\$20.00
		NUMBER OF GBL'S PER DCR	2		2	127	
		SUBTOTAL				64	
		AVERAGE WEIGHT					
149137		090		C4467610	1	516	\$30.96
		NUMBER OF GBL'S PER DCR	1		1	516	
		SUBTOTAL				516	
		AVERAGE WEIGHT					
871155		055		C4461118	5	1112	\$44.48
		062		C4462325	3	1007	\$50.35

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## DEFENSE DEPOT TRACY, CALIFORNIA

## ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
A	B	871155	063	C4462777 C4463103 C4465291 C4466485 C4467609 C4467686	3 3 3 7 1 2	732 455 316 1302 702 2507	\$43.92 \$29.94 \$18.96 \$65.10 \$42.12 \$100.28

NUMBER OF GBL'S PER DCR  
SUBTOTAL  
AVERAGE WEIGHT

871155                   069                   C4463701                   1                   240                   \$24.00

NUMBER OF GBL'S PER DCR  
SUBTOTAL  
AVERAGE WEIGHT

87327K                   069                   C4463702  
                         076                   C4465290  
                         083                   C4466487  
                         090                   C4467682

NUMBER OF GBL'S PER DCR  
SUBTOTAL  
AVERAGE WEIGHT

873270                   055                   C4461066  
                         062                   C4462323  
                         063                   C4462778  
                         069                   C4463699  
                         076                   C4463722  
                         083                   C4464784  
                         090                   C4465289  
                         090                   C4466492  
                         090                   C4467606  
                         090                   C4467671

NUMBER OF GBL'S PER DCR  
SUBTOTAL  
AVERAGE WEIGHT

87385A                   090                   C4467608                   1                   19                   \$20.00

NUMBER OF GBL'S PER DCR  
SUBTOTAL  
AVERAGE WEIGHT

8A                         C62KVQ                   34                   143                   63974  
                         8                           C4460716                   1                   6120                   \$78.68

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SHIPMENT COST

SHIPMENT WEIGHT

SUBTOTAL

AVERAGE WEIGHT

SUBTOTAL

SUBTOTAL

SUBTOTAL

8

A

DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
					1	6120 6120	
					1	13551	\$285.00
A	HX3620	055	C4461102		3	13551 13551	
B	SUBCA6	054	C4461032		6	1713 1713	\$19.58
					1	4563 2282	
					6	1713 1713	
	229	050 076	C4460262 C4465098		6	1680 2883	\$31.47 \$82.92
	3DK	057 067	C4460493 C4461784		1	1780 350	\$9.64 \$3.98
					7	2130 1065	
	87643U	070	C4463947		7	8791	\$261.67
					1	73	\$1.52
					1	3063	\$65.04
					6	2315	\$25.50
					3		
	87644J	049 063	C4459977 C4460026 C4462766		10	5451 1817	
					6	18476 34600	\$170.57 \$250.81
					3	18294 28630	\$295.00 \$295.01
					2	22483	\$295.00
					5	18455 9886	\$229.01 \$215.42
					25	10596	\$118.75
					9		
					084		

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## DEFENSE DEPOT TRACY, CALIFORNIA

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT		NUMBER OF WEIGHT OF SHIPPING UNITS	SHIPMENT COST
			SHIPPING DATE	GOVERNMENT BILL OF LADING		
B	A	87644U	084	C4466748	1	\$133.42
			088	C4467050	1	\$79.78
			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
		87650M	064	C4462945	6	4995
			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
		879743	056	C4461282	1	424
			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
		CLOAHB	083	C4466600	1	180
			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
		CLOC2	053	C446041	2	594
			055	C4461127	2	254
			060	C4461697	1	992
			063	C4462782	1	216
			064	C4462937	1	470
			067	C4463096	1	146
			069	C4463139	1	306
			081	C4463714	2	410
			070	C4464102	1	72
			074	C4464376	3	4020
			076	C4464998	1	137
				C4465220	1	1725
				C4465826	3	1889
				C4466302	2	200
				C4466317	1	1275
				C4466604	2	136
				C4467028	1	662
				C4467621	2	836
				C4467695	3	605
			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
		C62KVQ	069	C4463712	1	73
			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
		19	31	14945		
				787		

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## DEFENSE DEPOT TRACY, CALIFORNIA

## ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF UNITS	SHIPMENT WEIGHT	SHIPMENT COST
B	B	HX3619	049 050	C4460106 C4460193	1	73 73	\$44.62 \$23.32

NUMBER OF GBL'S PER DCR		
SUBTOTAL		
AVERAGE WEIGHT		
HX3620		
056	C4461241	5
060	C4461792	5
061	C4462163	1
062	C4462456	1
064	C446308	1
067	C4463318	1
069	C4463823	2
076	C4465288	4
078	C4465697	1
083	C4466605	2
084	C4466733	1

NUMBER OF GBL'S PER DCR		
SUBTOTAL		
AVERAGE WEIGHT		

NUMBER OF GBL'S PER DCR		
SUBTOTAL		
AVERAGE WEIGHT		
HX3620		
056	C4461241	5
060	C4461792	5
061	C4462163	1
062	C4462456	1
064	C446308	1
067	C4463318	1
069	C4463823	2
076	C4465288	4
078	C4465697	1
083	C4466605	2
084	C4466733	1

NUMBER OF GBL'S PER DCR		
SUBTOTAL		
AVERAGE WEIGHT		

NUMBER OF GBL'S PER DCR		
SUBTOTAL		
AVERAGE WEIGHT		
NOO236		
050	C4460202	2
	C4460318	1
054	C4460923	1
056	C4461246	1
062	C4462315	1
	C4462488	1
064	C4462780	2
069	C4463705	4
075	C4464946	1
076	C4465285	1
077	C4465546	2
078	C4465684	1
081	C446BB28	1
082	C4466303	1
083	C4466314	1
	C4466609	2
088	C4467092	1
090	C4467614	1
	C4467692	8

NUMBER OF GBL'S PER DCR		
SUBTOTAL		
AVERAGE WEIGHT		

NUMBER OF GBL'S PER DCR		
SUBTOTAL		
AVERAGE WEIGHT		
NOO296		
049	C4460068	1
	C4460068	1

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## DEFENSE DEPOT TRACY, CALIFORNIA

## ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
B	B	N00296	050	C4460200	2	163	\$17.00
			053	C4460434	1	220	\$18.26
			055	C4461125	2	469	\$32.90
			061	C4462257	1	166	\$17.00
			062	C4462591	1	183	\$17.00
			063	C4462789	2	95	\$17.00
			064	C4462936	1	860	\$58.05
			067	C4463097	1	445	\$33.68
			074	C4464642	1	155	\$17.00
			075	C4464942	1	462	\$33.68
			076	C4465284	2	339	\$28.14
			083	C4466602	4	783	\$52.84
			089	C4467555	1	550	\$37.13
			080	C4467697	1	174	\$14.44
			15			22	5226
						348	

NUMBER OF GBL'S PER DCR  
SUBTOTAL  
AVERAGE WEIGHT

N0053A 080 C4467623

NUMBER OF GBL'S PER DCR  
SUBTOTAL  
AVERAGE WEIGHT

N00849 050 C4460191

NUMBER OF GBL'S PER DCR  
SUBTOTAL  
AVERAGE WEIGHT

N62448 082 C4466305

NUMBER OF GBL'S PER DCR  
SUBTOTAL  
AVERAGE WEIGHT

NUMBER OF GBL'S PER DCR	SUBTOTAL	AVERAGE WEIGHT	NUMBER OF GBL'S PER DCR	SUBTOTAL	AVERAGE WEIGHT	NUMBER OF GBL'S PER DCR	SUBTOTAL	AVERAGE WEIGHT
055	068	C4461129	1	80	\$17.00	057	C4461685	2
		C4463618	2					
2				3		2	19165	\$188.88
							2	
							19165	
							19165	
							2	
								\$04

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## DEFENSE DEPOT TRACY, CALIFORNIA

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT			SHIPMENT COST
			SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	
B			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
			SW3200	048	1	2
				075	1	56 \$0.00
				077	1	1068 \$.01
				089	1	375 \$0.00
					4	6010 \$.01
			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
			W81A1J	074	1	188 \$17.00
					1	
			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
			W81BV3	063	1	2040 \$106.08
					1	
			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
			Z11412	069	1	120 \$13.16
					1	
			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
			Z34360	075	1	22 \$17.00
					1	
			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
			247500	061	1	470 \$33.68
				070	2	220 \$18.26
				075	1	80 \$4.84
				090	1	115 \$17.00
					2	215 \$17.85
			NUMBER OF GBL'S PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
			228	049	5	100 \$8.48
				053	2	329 \$104.82
				055	3	2286 \$37.87
				057	3	561 \$102.49
					5	1767 \$302 \$17.97

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## DEFENSE DEPOT TRACY, CALIFORNIA

## ACTUAL NUMBER OF SMALL PARCEL CARRIER SHIPMENTS BUILT

GEOGRAPHIC AREA	MODE OF PARCEL POST SHIPMENT ZONE	NUMBER OF SHIPPING UNITS	TOTAL WEIGHT	AVERAGE WEIGHT	COST PER SHIPMENT	TOTAL SHIPMENT COST	
A	G	2	27	386.782	\$2.75	\$74.25	
		3	23	72.215	\$2.10	\$48.30	
	5	2	262	13449.458	\$5.53	\$1,448.86	
B	G	3	161	1656.226	\$2.55	\$410.55	
		8	15	248.820	\$8.48	\$127.20	
		1	247	3553.495	\$2.75	\$679.25	
	5	2	43	359.546	\$2.30	\$98.90	
C	G	4	3	18.282	\$3.10	\$9.30	
		9	235	4559.852	\$0.00	\$0.00	
		1	1167	38024.096	\$4.11	\$4,796.37	
	5	2	284	4620.924	\$2.70	\$766.80	
D	G	3	15	111.639	\$2.16	\$32.40	
		9	1	14.476	\$3.85	\$3.85	
		1	71	669.537	\$2.38	\$168.98	
	5	2	64	659.362	\$2.47	\$158.08	
E	G	3	18	182.347	\$3.11	\$55.98	
		9	27	382.888	\$0.00	\$0.00	
		1	446	10989.022	\$3.42	\$1,525.32	
	5	2	522	14583.723	\$3.69	\$1,926.18	
F	G	3	256	5984.924	\$4.20	\$1,075.20	
		9	9	86.097	\$5.53	\$49.77	
		3	239	3898.818	\$3.70	\$884.30	
	5	3	553	15585.636	\$4.84	\$2,676.52	
G	G	3	110	915.123	\$2.82	\$310.20	
		4	258	3563.945	\$4.56	\$1,764.48	
		9	156	1573.572	\$0.00	\$0.00	
	5	3	403	11003.982	\$4.71	\$1,898.13	
H	G	4	996	24963.653	\$5.72	\$5,697.12	
		9	3	275.715	\$0.00	\$0.00	
		4	64	589.127	\$3.78	\$261.92	
	5	9	24	170.335	\$0.00	\$0.00	
I	G	4	758	24282.786	\$7.01	\$5,313.58	
		5	1	9	\$3.29	\$29.61	
		9	145	2619.133	\$2.93	\$424.85	
	5	9	39	323.631	\$0.00	\$0.00	
J	G	1	150	6573.314	\$4.99	\$748.50	
		2	289	9655.305	\$4.19	\$1,210.91	
		2	20	92.158	\$1.95	\$39.00	
	5	4	71	1023.099	\$4.67	\$331.57	
K	G	5	31	455.455	\$6.44	\$199.64	
		6	2	4.972	\$2.98	\$5.96	
		5	5	24.288	\$1.62	\$8.10	
	5	4	816	33551.969	\$8.56	\$6,984.96	
L	G	5	649	16690.124	\$6.94	\$4,504.06	
		6	97	2519.231	\$8.63	\$837.11	
I	G	1	15	202.917	13.528	\$2.69	\$40.35

## DEFENSE DEPOT TRACY, CALIFORNIA

		9	451	29604.344	65.642	\$0.00	\$0.00
	5	1	264	6641.052	25.156	\$3.51	\$926.64
J	G	4	35	455.741	13.021	\$4.56	\$159.60
		5	65	679.866	10.459	\$5.40	\$351.00
		9	415	14036.154	33.822	\$0.00	\$0.00
	5	3	2	3.311	1.656	\$1.47	\$2.94
		4	556	12464.771	22.419	\$5.21	\$2,896.76
		5	823	31167.422	37.871	\$9.68	\$7,966.64
		7	12	20.944	1.745	\$2.20	\$26.40
		9	1	46.860	46.860	\$0.00	\$0.00
K	G	2	20	170.137	8.507	\$2.30	\$46.00
		4	47	566.830	12.060	\$4.44	\$208.68
		5	19	185.647	9.771	\$5.05	\$95.95
		6	3	53.350	17.783	\$8.85	\$26.55
	5	2	236	6188.677	26.223	\$3.60	\$849.60
		4	700	22296.582	31.852	\$6.84	\$4,788.00
		5	333	11633.644	34.936	\$9.01	\$3,000.33
		6	73	1910.810	26.175	\$8.91	\$650.43
		8	1	0.110	0.110	\$1.91	\$1.91
L	G	3	110	2000.086	18.183	\$3.83	\$421.30
		4	160	2709.927	16.937	\$4.88	\$780.80
	5	3	10	238.271	23.827	\$4.20	\$42.00
		4	635	19255.830	30.324	\$6.62	\$4,203.70
M	G	4	10	174.229	17.423	\$4.98	\$49.80
	5	4	231	12802.933	55.424	\$10.21	\$2,358.51
		5	20	340.560	17.028	\$5.21	\$104.20
N	G	5	19	306.944	16.155	\$6.75	\$128.25
		6	66	670.274	10.156	\$6.83	\$450.78
		7	48	739.816	15.413	\$10.52	\$504.96
	5	5	285	4247.430	14.903	\$4.56	\$1,299.60
		6	251	4279.286	17.049	\$6.38	\$1,601.38
		7	624	27699.683	44.391	\$17.27	\$10,776.48
O	G	5	23	157.157	6.833	\$4.00	\$92.00
		6	1	16.500	16.500	\$8.66	\$8.66
	5	5	564	16857.907	29.890	\$7.80	\$4,399.20
		6	11	151.019	13.729	\$5.26	\$57.86
P	G	6	20	215.083	10.754	\$6.83	\$136.60
		7	9	112.310	12.479	\$9.65	\$86.85
	5	6	608	11134.442	18.313	\$6.67	\$4,055.36
		7	304	4892.657	16.094	\$7.26	\$2,207.04
		8	1	1.177	1.177	\$2.37	\$2.37
Q	G	5	2	4.818	2.409	\$2.59	\$5.18
		6	12	267.355	22.280	\$9.68	\$116.16
		7	19	282.821	14.885	\$10.24	\$194.56
	5	5	67	1020.338	15.229	\$4.78	\$320.26
		6	298	3845.413	12.904	\$4.98	\$1,484.04
		7	354	4205.091	11.879	\$5.51	\$1,950.54
		8	5	100.100	20.020	\$10.16	\$50.80
R	G	8	92	1430.506	15.549	\$15.35	\$1,412.20
		9	420	5525.113	13.155	\$0.00	\$0.00

## DEFENSE DEPOT TRACY, CALIFORNIA

	5	7 8 9	127 1281 1	1809.797 116784.481 5.280	14.250 91.167 5.280	\$6.57 \$24.79 \$0.00	\$834.39 \$31,755.99 \$0.00
S	G	7 8 9	12 12 157	98.483 185.493 1657.964	8.207 15.458 10.560	\$7.17 \$15.35 \$0.00	\$86.04 \$184.20 \$0.00
	5	7 8	511 311	9193.921 5923.269	17.992 19.046	\$7.61 \$9.74	\$3,888.71 \$3,029.14
T	G	8 9	40 18	339.691 98.648	8.492 5.480	\$10.22 \$0.00	\$408.80 \$0.00
	5	8	585	9933.913	16.981	\$8.48	\$4,960.80
U	G	7 8	14 39	202.928 694.991	14.495 17.820	\$10.24 \$16.11	\$143.36 \$628.29
	5	7 8	347 790	4979.502 19368.371	14.350 24.517	\$6.57 \$11.84	\$2,279.79 \$9,353.60
V	G	3 8 9	1 56 372	0.011 649.836 3915.637	0.011 11.604 10.526	\$1.81 \$13.09 \$0.00	\$1.81 \$733.04 \$0.00
	S	3 5 8	13 2 1057	205.150 5.148 25557.378	15.781 2.574 24.179	\$3.18 \$2.11 \$11.84	\$41.34 \$4.22 \$12,514.88
W	G	8 9	41 310	645.315 3331.977	15.739 10.748	\$15.35 \$0.00	\$629.35 \$0.00
	5	5 8	6 900	42.372 45107.986	7.062 50.120	\$3.05 \$22.79	\$18.30 \$20,511.00
X	G	9	5	40.645	8.129	\$0.00	\$0.00
	5	9	2	0.209	0.105	\$0.00	\$0.00
Y	G	4 5	19 66	283.503 785.708	14.921 11.905	\$4.67 \$5.75	\$88.73 \$379.50
	5	4 5	302 450	9877.098 14656.378	32.706 32.570	\$7.01 \$8.58	\$2,117.02 \$3,861.00
Z	G	5	56	875.039	15.626	\$6.60	\$369.60
	5	5	689	35175.811	51.053	\$12.41	\$8,550.49
TOTAL			27726	837661.220			\$215,690.67

## DEFENSE DEPOT TRACY, CALIFORNIA

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPMENT DATE	ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT			SHIPMENT WEIGHT	SHIPMENT COST
				SHIPPING	GOVERNMENT	BILL OF LADING		
B	8	228		062	C4462319		4	\$17.00
					C4462464		111	\$9.21
				063	C4462787	10	1967	\$103.94
				064	C4462940	4	115	\$9.53
				074	C4464378	2	526	\$35.51
				076	C4465287	10	999	\$59.42
				077	C4465545	3	1273	\$75.75
				082	C4466299	1	45	\$3.73
				083	C4466316	3	5082	\$127.05
				088	C4466612	14	2800	\$123.41
				089	C4467101	10	4145	\$103.65
				090	C4467536	2	6	\$5.50
					C4467620	3	925	\$59.44
					C4467691	9	695	\$55.42
						88	24178	
						1273		
NUMBER OF GBL'S PER DCR								
SUBTOTAL								
AVERAGE WEIGHT								
				049	C4460071		220	\$14.85
				055	C4461138	2	45	\$39.81
				056	C4461408	2	56	\$33.78
				060	C4461693	1	424	\$105.46
				063	C4462792	1	87	\$17.00
				064	C4462941	1	1	\$3.14
				069	C4463706	2	130	\$10.79
				070	C4464110	4	316	\$4.896
				076	C4465098	2	0	\$0.00
					C4465286	4	169	\$14.03
					C4465907	1	7	\$17.00
				081	C4466300	1	29	\$2.41
				082	C4466313	1	424	\$33.68
				083	C4466521	1	2165	\$112.58
				084	C4466737	1	204	\$16.93
				090	C4467612	1	95	\$5.65
					C4467688	2	60	\$4.98
					C4467699	2	158	\$17.00
						18		
NUMBER OF GBL'S PER DCR								
SUBTOTAL								
AVERAGE WEIGHT								
				089	C4467556	32	4590	
				090	C4467694	1	255	
						2		
NUMBER OF GBL'S PER DCR								
SUBTOTAL								
AVERAGE WEIGHT								
				369104	C4464107	1	89	\$17.00
					C4465544	1	156	\$47.00
					4467696	1		
						2	245	
							123	
								\$6.67
								\$28.12
								\$17.00

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DEFENSE DEPOT TRACY, CALIFORNIA

GEOGRAPHIC AREA	MODE OF DCR	SHIPMENT DATE	ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT		SHIPMENT WEIGHT	SHIPMENT COST
			SHIPPING	GOVERNMENT		
B	87494A				3	257
					3	86
					1	108
						\$17.00
			NUMBER OF GBLS PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
		069		C4463822		
					1	108
						108
						108
			NUMBER OF GBLS PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
		87495		048	C445973J	
				069	C4463711	
				076	C4465219	
						223
						74
						176
						\$18.51
						\$17.00
						\$17.00
			NUMBER OF GBLS PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
		87618A		062	C4462460	
						1
						1
						110
						110
						158
						473
						110
						\$17.00
			NUMBER OF GBLS PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
		87618B		083	C4466596	
						1
						1
						282
						282
						282
						\$23.41
			NUMBER OF GBLS PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
		876180		055	C4460977	
					C4461128	
					C4462030	
					C4462317	
					C4462457	
					C4462786	
					C4464136	
					C4465541	
					C4466595	
					C4466734	
					C4467024	
						1
						1
						1
						160
						305
						52
						38
						964
						89
						290
						5731
						268
						600
						45
						\$17.00
			NUMBER OF GBLS PER DCR			
			SUBTOTAL			
			AVERAGE WEIGHT			
		87643J		050	C4460185	
					C4461240	
					C4461698	
						7
						519
						480
						281
						160
						1419
						379
						\$19.46
						\$32.40
						\$21.76
						\$11.23
						\$84.42
						\$26.43

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## DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT		
SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS
8	8764JJ	C4464640 C4464995 C4465692 C4465827
	074 076 078 081	1 3 1 2
		.42 961 205 1298
		\$2.84 \$59.44 \$13.84 \$61.52

## NUMBER OF GBLS PER DCR

## SUBTOTAL

## AVERAGE WEIGHT

8764JL

047	C4459393	1	1168	\$79.86
050	C4460186	1	371	\$30.79
055	C4461133	6	441	\$111.03
056	C4461243	2	1773	\$103.95
057	C4461553	1	265	\$22.00
060	C4461793	1	895	\$59.44
064	C4462939	1	523	\$35.30
068	C4463621	4	2503	\$110.85
069	C4463716	3	1567	\$81.48
070	C4464096	2	1804	\$103.95
073	C4464943	3	519	\$35.03
088	C4467091	1	39	\$13.56

## NUMBER OF GBLS PER DCR

## SUBTOTAL

## AVERAGE WEIGHT

8764J9

061	C4462255	2	386	\$32.04
062	C4462589	1	110	\$17.00
069	C4463713	1	240	\$19.92

## NUMBER OF GBLS PER DCR

## SUBTOTAL

## AVERAGE WEIGHT

8764JE

055	C4461137	2	114	\$17.00
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## NUMBER OF GBLS PER DCR

## SUBTOTAL

## AVERAGE WEIGHT

8764JJ

049	C4460067	1	86	\$7.14
054	C4460924	1	508	\$34.29
062	C4462592	1	872	\$124.38
073	C4464845	1	94	\$15.22
083	C4466517	1	0	\$0.00
085	C4466916	1	11160	\$295.00
088	C4467089	1	600	\$40.50
089	C4467557	1	88	\$17.00

NUMBER OF GBLS PER DCR  
SUBTOTAL  
AVERAGE WEIGHT

8 13408  
6 1676

## DEFENSE DEPOT TRACY, CALIFORNIA

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT  
 GEOGRAPHIC AREA MODE OF SHIPMENT

SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT COST
049	C4460065	1	\$14.03
067	C4463098	2	\$37.13
080	C4467705	1	\$17.00

NUMBER OF GBLS PER DCR  
 SUBTOTAL  
 AVERAGE WEIGHT  
 876440 049 C4466594 3

NUMBER OF GBLS PER DCR  
 SUBTOTAL  
 AVERAGE WEIGHT  
 876455 083 C4466594 1

NUMBER OF GBLS PER DCR  
 SUBTOTAL  
 AVERAGE WEIGHT  
 876501 055 C4462320 1

NUMBER OF GBLS PER DCR  
 SUBTOTAL  
 AVERAGE WEIGHT  
 876505 062 C4462320 1

NUMBER OF GBLS PER DCR  
 SUBTOTAL  
 AVERAGE WEIGHT  
 876535 049 C4460104 2

NUMBER OF GBLS PER DCR  
 SUBTOTAL  
 AVERAGE WEIGHT  
 87655A 062 C4462462 4

NUMBER OF GBLS PER DCR  
 SUBTOTAL  
 AVERAGE WEIGHT  
 87655A 069 C4463719 2

NUMBER OF GBLS PER DCR  
 SUBTOTAL  
 AVERAGE WEIGHT  
 87655A 076 C4465260 2

NUMBER OF GBLS PER DCR  
 SUBTOTAL  
 AVERAGE WEIGHT  
 8862 1477

SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT COST
067	C4463098	2	\$37.13
080	C4467705	1	\$17.00

SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT COST
083	C4466594	1	\$17.00

SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT COST
055	C4461135	1	\$17.00
088	C4467031	84	\$17.00
089	C4467559	100	\$10.06

SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT COST
062	C4462320	1	\$17.00
067	C4463094	1	\$17.00

SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT COST
049	C4460104	2	\$32.37
055	C4461134	1	\$17.00
056	C4461245	1	\$33.68
078	C4465691	431	\$33.68
083	C4466601	18	\$4.71
089	C4467558	711	\$47.99
090	C4467702	111	\$17.00

SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT COST
062	C4462462	8	\$209.77
069	C4463719	300	\$103.95

SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT COST
076	C4465260	2	\$32.37
077	C4465852	1	\$85.06
083	C4466610	3	\$26.73
084	C446736	4	\$128.50

SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT COST
062	C4462462	4	\$17.00
069	C4463719	2	\$103.95
076	C4465260	2	\$32.37
077	C4465852	1	\$85.06
083	C4466610	3	\$26.73
084	C446736	4	\$128.50

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NUMBER OF GBLS PER DCR  
 SUBTOTAL  
 AVERAGE WEIGHT  
 8862 1477

**DEFENSE DEPOT TRACY. CALIFORNIA**

ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT		SHIPMENT DATE		NUMBER OF SHIPPING UNITS		SHIPMENT WEIGHT		SHIPMENT COST			
MODE OF SHIPMENT	DCR AREA	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST	SHIPMENT WEIGHT	SHIPMENT COST			
B	87672B	049	C4460069	1	265	\$22.00	053	C4460435	2	395	\$32.79
		054	C4460917	1	681	\$45.97					
		055	C4460980	1	276	\$22.91					
			C4461126	2	224	\$18.59					
			C4461695	2	592	\$39.96					
		060	C44622790	1	130	\$17.00					
		063	C4463638	1	720	\$48.60					
		069	C4463710	2	72	\$8.05					
		070	C4464104	1	132	\$17.00					
		076	C4465276	1	124	\$17.00					
		077	C4465542	1	85	\$17.00					
		083	C4466607	2	813	\$54.86					
		088	C4467027	1	96	\$17.00					
		090	C4467617	1	2761	\$124.98					
			C4467698	2	727	\$49.07					

NUMBER OF TRANSPORTATION UNITS BUILT		SHIPMENT DATE		NUMBER OF SHIPPING UNITS		SHIPMENT WEIGHT		SHIPMENT COST	
MODE OF SHIPMENT	DCR AREA	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST	SHIPMENT WEIGHT	SHIPMENT COST	
B	87672C	061	C4462260	2	196	\$17.00			
		064	C4462938	1	203	\$16.85			
		069	C4463708	1	76	\$17.00			
			C4464999	2	350	\$29.05			
			C4465281	2	352	\$23.76			
		077	C4465549	1	428	\$33.68			
		078	C4465696	1	668	\$45.09			
		090	C4467700	1	218	\$18.09			

**NUMBER OF GBLS PER DCR**

SUBTOTAL		AVERAGE WEIGHT		SUBTOTAL		AVERAGE WEIGHT	
87672C	AVERAGE WEIGHT	87673A	AVERAGE WEIGHT	87673A	AVERAGE WEIGHT	87674L	AVERAGE WEIGHT
		049	C4460070	2	3348	\$124.98	
		050	C4460190	2	105	\$17.00	
		069	C4463717	1	101	\$17.00	
		070	C4464100	2	728	\$48.14	
		074	C4464375	1	1156	\$68.78	
		083	C4466599	1	677	\$45.70	
		090	C4467703	2	3625	\$124.98	

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SUBTOTAL		AVERAGE WEIGHT		SUBTOTAL		AVERAGE WEIGHT	
87673A	AVERAGE WEIGHT	87674L	AVERAGE WEIGHT	87674L	AVERAGE WEIGHT	87674L	AVERAGE WEIGHT
		22	8093	22	8093	22	8093
			506		506		506

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SUBTOTAL		AVERAGE WEIGHT		SUBTOTAL		AVERAGE WEIGHT	
87674L	AVERAGE WEIGHT	87675	AVERAGE WEIGHT	87675	AVERAGE WEIGHT	87675	AVERAGE WEIGHT
		11	2491	11	2491	11	2491
			311		311		311

NUMBER OF GBLS PER DCR		SUBTOTAL		NUMBER OF GBLS PER DCR		SUBTOTAL	
87674L	AVERAGE WEIGHT	87675	AVERAGE WEIGHT	87675	AVERAGE WEIGHT	87675	AVERAGE WEIGHT
		1	70	1	70	1	70
			123		123		123

## DEFENSE DEPOT TRACY, CALIFORNIA

## ACTUAL NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	MODE OF SHIPMENT	DCR	SHIPPING DATE	GOVERNMENT BILL OF LADING	NUMBER OF SHIPPING UNITS	SHIPMENT WEIGHT	SHIPMENT COST
A					97		
	AVERAGE WEIGHT					80	\$17.00
	876832	082	C4466306	1		31	\$17.00
		083	C4466321	1		80	\$17.00
		089	C4467560	1			

## NUMBER OF GBLS PER DCR

## SUBTOTAL

## AVERAGE WEIGHT

87972A

061  
083

## NUMBER OF GBLS PER DCR

## SUBTOTAL

## AVERAGE WEIGHT

87974D

048  
055  
061  
076  
082  
090

NUMBER OF GBLS PER DCR	2	120	60
SUBTOTAL	3	191	64
AVERAGE WEIGHT			
	C4462261	1	
	C4466319	1	
		45	

## NUMBER OF GBLS PER DCR

## SUBTOTAL

## AVERAGE WEIGHT

87974E

076  
J  
090

NUMBER OF GBLS PER DCR	6	120	60
SUBTOTAL	2	191	64
AVERAGE WEIGHT			
	C4459732	1	
	C4461116	1	
	C4462282	1	
	C4464994	1	
	C4466304	2	
	C4467619	1	
		7	

NUMBER OF GBLS PER DCR	6	120	60
SUBTOTAL	7	191	64
AVERAGE WEIGHT			
	C4464992	1	
	C4465278	1	
	C4467618	1	
		151	
		172	
		7	

NUMBER OF GBLS PER DCR	6	120	60
SUBTOTAL	7	191	64
AVERAGE WEIGHT			
	C4460978	1	
	C4467025	1	
		196	
		420	

NUMBER OF GBLS PER DCR	6	120	60
SUBTOTAL	2	191	64
AVERAGE WEIGHT			
	C4461132	1	
	C4467086	1	
		105	
		65	

NUMBER OF GBLS PER DCR	6	120	60
SUBTOTAL	2	191	64
AVERAGE WEIGHT			
	C4461132	1	
	C4467086	1	
		170	
		85	

554

277

415745

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## DEFENSE DEPOT, TRACY, CALIFORNIA

## OPTIMIZED NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	DCR	TOTAL NUMBER OF LTL	AVERAGE TOTAL LTL WEIGHT	TOTAL NUMBER OF LTL WEIGHT	TOTAL TL WEIGHT	NUMBER OF SHIPMENTS	TOTAL TL WEIGHT
A							
Z12508	1	1	625.471	625.471	0.000	0	0.000
Z13413	1	1	154.165	154.165	0.000	0	0.000
Z13414	1	1	246.829	246.829	0.000	0	0.000
Z20285	1	1	12088.168	12088.168	0.000	0	0.000
Z36266	2	2	399.344	399.344	0.000	0	0.000
129AD5	1	1	82.720	82.720	0.000	0	0.000
129A12	1	1	89.958	89.958	0.000	0	0.000
149136	1	1	128.700	128.700	0.000	0	0.000
149137	1	1	597.740	597.740	0.000	0	0.000
871155	9	9	9575.453	1063.939	0.000	0	0.000
871730	1	1	71.885	71.885	0.000	0	0.000
871744	1	1	135.322	135.322	0.000	0	0.000
871754	3	3	618.860	206.287	0.000	0	0.000
872244	1	1	70.367	70.367	0.000	0	0.000
872784	1	1	104.522	104.522	0.000	0	0.000
87327K	3	3	6973.910	2324.637	0.000	0	0.000
873270	19	19	56509.676	2974.193	0.000	0	0.000
87385A	1	1	141.328	141.328	0.000	0	0.000
SUBTOTALS		49	88614.418	88614.418	0.000	0	0.000
B							
CLOAH-B	2	2	317.361	158.680	0.000	0	0.000
CLOC2	7	7	17766.574	2528.082	0.000	0	0.000
C62KV0	2	2	6819.941	3409.970	0.000	0	0.000
HXJ619	1	1	1128.002	1128.002	0.000	0	0.000
HXJ620	5	5	50129.598	10025.920	0.000	0	0.000
N00236	14	14	11026.520	7877.609	0.000	0	0.000
N00296	8	8	6982.773	872.847	0.000	0	0.000
N0053A	1	1	228.800	228.800	0.000	0	0.000
N00849	1	1	301.356	301.356	0.000	0	0.000
N62448	1	1	86.592	86.592	0.000	0	0.000
N62848	2	2	580.986	295.493	0.000	0	0.000
N63134	1	1	190.971	190.971	0.000	0	0.000
NO4648	1	1	1326.424	1326.424	0.000	0	0.000
RJ5831	1	1	167.629	167.629	0.000	0	0.000
R05849	5	5	879.943	175.989	0.000	0	0.000
R07171	1	1	144.848	144.848	0.000	0	0.000
R20112	1	1	93.764	93.764	0.000	0	0.000
R20113	1	1	82.797	82.797	0.000	0	0.000
R20993	3	3	576.895	192.298	0.000	0	0.000
R54048	1	1	138.468	138.468	0.000	0	0.000
SUBCA6	2	2	23504.695	11752.347	0.000	0	0.000
SW3200	3	3	11433.781	3811.260	0.000	0	0.000
W62M40	1	1	91.762	91.762	0.000	0	0.000
WB1A1J	2	2	236.126	116.063	0.000	0	0.000
WB1BY3	1	1	1848.000	1848.000	0.000	0	0.000
Z11412	1	1	123.838	123.838	0.000	0	0.000
Z30463	1	1	131.901	131.901	0.000	0	0.000
Z4350	1	1	130.108	130.108	0.000	0	0.000
Z47500	4	4	2884.281	721.070	0.000	0	0.000
228	23	23	32235.504	1418.935	0.000	0	0.000
228	8	8	9392.781	1043.642	0.000	0	0.000

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## DEFENSE DEPOT TRACY, CALIFORNIA

OPTIMIZED NUMBER OF TRANSPORTATION UNITS BUILT

GEOGRAPHIC AREA	DCR	TOTAL NUMBER OF LTL	AVERAGE WEIGHT LTL	TOTAL WEIGHT	TOTAL NUMBER OF LTL	AVERAGE WEIGHT LTL	TOTAL WEIGHT	SHIPPMENTS
B								0
	3DK	2	2230	0.96	1115	0.48	504	0.000
	J69104	1	1905	904	1905	904	0	0.000
	369106	3	577	247	192	416	0	0.000
	874944	1	138	919	138	919	0	0.000
	874995	3	906	674	302	225	0	0.000
	87613A	2	330	572	165	286	0	0.000
	87618A	2	310	277	155	138	0	0.000
	87618B	1	402	402	402	402	0	0.000
	87618C	8	9222	598	152	825	0	0.000
	87618D	1	159	390	159	390	0	0.000
	87637A	1	20679	750	1879	977	0	0.000
	87643J	1	26829	219	3832	746	0	0.000
	87643L	7	903	331	150	555	0	0.000
	87643M	6	78	659	76	659	0	0.000
	87644G	1	99949	875	9086	352	0	0.000
	87644J	1	955	471	318	490	0	0.000
	87644O	3	178	200	178	200	0	0.000
	876459	1	464	585	116	146	0	0.000
	87650L	4	5147	910	2573	955	0	0.000
	87650N	2	3495	523	582	587	0	0.000
	87650S	1	171	335	71	335	0	0.000
	876535	12	3142	699	261	892	0	0.000
	87655A	4	20108	770	5027	192	0	0.000
	87672B	7	10788	996	1541	285	0	0.000
	87672C	6	3495	523	2172	052	0	0.000
	87673A	5	10860	258	133	280	0	0.000
	87674L	3	399	839	272	897	0	0.000
	876832	2	545	795	261	107	0	0.000
	876972A	3	783	320	240	438	0	0.000
	877940	5	1202	189	252	009	0	0.000
	877974E	2	504	019	484	439	0	0.000
	877974J	1	484	439	342	804	0	0.000
	899101	2	685	608	159	005	0	0.000
	899102	2	318	010	159	005	0	0.000
<b>SUBTOTALS</b>		232	406152	898	5	15000	0.00	

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FS2040	1	7521	512	7521	512	0.000
HX3618	1	1892	901	1892	901	0.000
HXJ630	2	2676	550	1336	275	0.000
N63042	1	54578	551	4961	686	0.000
R52855	1	146	223	146	223	0.000
W62TFU	1	72	050	72	050	0.000
W62W67	1	546	700	546	700	0.000
W81AG8	1	193	600	193	600	0.000
149102	2	893	838	446	919	0.000
221	2	501	600	250	800	0.000
87442A	3	3164	291	1054	764	0.000
87442B	4	2777	119	694	280	0.000
87442C	16	34164	957	2135	310	30000
87443H	3	12801	520	4269	113	1
87443N	2	310	453	155	226	0
87443Q	1	3831	508	3831	508	0

## DEFENSE DEPOT TRACY, CALIFORNIA

## OPTIMAL NUMBER OF SMALL PARCEL CARRIER SHIPMENTS BUILT

GEOGRAPHIC AREA	MODE OF POST SHIPMENT ZONE	NUMBER OF SHIPPING UNITS	TOTAL WEIGHT	AVERAGE WEIGHT COST/SHIPMENT	TOTAL SHIPMENT COST
A	G 2	7	47.113	\$2.75	\$19.25
	G 3	14	83.897	\$2.10	\$29.40
	S 5	52	1012.726	\$5.53	\$287.56
	S 3	54	646.470	\$2.55	\$137.70
	S 8	5	111.705	\$8.48	\$42.40
B	G 1	59	975.700	\$2.75	\$162.25
	G 2	11	128.491	\$2.30	\$25.30
	G 9	110	1615.988	\$0.00	\$0.00
	S 5	377	5818.571	\$4.11	\$1,549.47
	S 2	86	1247.180	\$2.70	\$232.20
	S 3	3	45.496	\$2.16	\$6.48
	S 4	3	32.758	\$3.85	\$11.55
C	G 1	28	444.510	\$2.38	\$66.64
	G 2	18	188.056	\$2.47	\$44.46
	G 9	11	250.492	\$0.00	\$0.00
	S 5	110	1384.658	\$3.42	\$376.20
	S 2	137	1862.631	\$3.69	\$505.53
	S 3	53	409.486	\$4.20	\$222.60
	S 8	5	86.097	\$5.53	\$27.65
D	G 3	33	591.173	\$3.70	\$122.10
	G 9	1	1.540	\$0.00	\$0.00
	S 5	97	1400.772	\$4.84	\$469.48
E	G 3	66	704.484	\$2.82	\$186.12
	G 4	55	553.091	\$4.56	\$250.80
	G 9	107	1554.762	\$0.00	\$0.00
	S 5	124	1483.581	\$4.71	\$584.04
	S 4	368	4951.221	\$5.72	\$2,104.96
	S 9	1	0.990	\$0.00	\$0.00
F	G 4	29	256.542	\$3.78	\$109.62
	G 9	13	298.661	\$0.00	\$0.00
	S 5	4	2875.004	\$7.01	\$1,647.35
G	G 2	24	306.449	\$2.93	\$70.32
	G 9	81	750.079	\$0.00	\$0.00
	S 5	1	545.940	\$4.99	\$99.80
	S 2	48	526.833	\$4.19	\$201.12
H	G 2	18	102.146	\$1.95	\$35.10
	G 4	13	139.755	\$4.67	\$60.71
	G 5	10	93.181	\$6.44	\$64.40
	S 5	2	14.300	\$1.62	\$4.86
	S 4	278	4000.852	\$8.56	\$2,379.68
	S 5	203	2567.026	\$6.94	\$1,408.82
	S 6	19	196.889	\$8.63	\$163.97
I	G 9	483	5437.795	\$0.00	\$0.00
	S 5	1	523.050	\$3.51	\$161.46

## DEFENSE DEPOT TRACY, CALIFORNIA

J	G	4	13	152.196	11.707	\$4.56	\$59.28
		5	19	222.838	11.728	\$5.40	\$102.60
		9	191	2227.566	11.663	\$0.00	\$0.00
	5	3	2	3.311	1.656	\$1.47	\$2.94
		4	257	3524.378	13.714	\$5.21	\$1,338.97
		5	455	5769.434	12.680	\$9.68	\$4,404.40
		7	8	19.844	2.481	\$2.20	\$17.60
		9	1	46.860	46.860	\$0.00	\$0.00
K	G	2	8	105.886	13.236	\$2.30	\$18.40
		4	10	87.417	8.742	\$4.44	\$44.40
		5	7	128.623	18.375	\$5.05	\$35.35
	5	2	57	676.489	11.868	\$3.60	\$205.20
		4	326	4344.120	13.326	\$6.84	\$2,229.84
		5	174	2527.382	14.525	\$9.01	\$1,567.74
		6	8	129.547	16.193	\$8.91	\$71.28
		8	1	0.110	0.110	\$1.91	\$1.91
L	G	3	34	554.696	16.315	\$3.83	\$130.22
		4	31	649.858	20.963	\$4.88	\$151.28
	5	4	127	2150.344	16.932	\$6.62	\$840.74
M	5	4	52	648.923	12.479	\$10.21	\$530.92
		5	4	51.260	12.815	\$5.21	\$20.84
N	G	5	9	164.802	18.311	\$6.75	\$60.75
		6	32	417.439	13.045	\$6.83	\$218.56
		7	10	141.647	14.165	\$10.52	\$105.20
	5	5	129	1683.176	13.048	\$4.56	\$588.24
		6	103	1104.136	10.720	\$6.38	\$657.14
		7	409	5475.888	13.388	\$17.27	\$7,063.43
O	G	5	3	0.924	0.308	\$4.00	\$12.00
	5	5	289	4160.046	14.395	\$7.80	\$2,254.20
		6	10	180.301	18.030	\$5.26	\$52.60
P	G	6	7	215.116	30.731	\$6.83	\$47.81
		7	9	229.185	25.465	\$9.65	\$86.85
	5	6	326	4510.583	13.836	\$6.67	\$2,174.42
		7	239	2711.170	11.344	\$7.26	\$1,735.14
		8	1	1.177	1.177	\$2.37	\$2.37
Q	G	5	1	4.818	4.818	\$2.59	\$2.59
		6	6	183.458	30.576	\$9.68	\$58.08
		7	12	223.575	18.631	\$10.24	\$122.88
	5	5	33	435.336	13.192	\$4.78	\$157.74
		6	133	1668.447	12.545	\$4.98	\$662.34
		7	210	2449.964	11.666	\$5.51	\$1,157.10
		8	3	29.150	9.717	\$10.16	\$30.48
R	G	8	68	910.613	13.391	\$15.35	\$1,043.80
		9	305	4926.273	16.152	\$0.00	\$0.00
	5	2	1	19.800	19.800	\$2.97	\$2.97
		7	65	676.522	10.408	\$6.57	\$427.05
		8	1104	14014.891	12.695	\$24.79	\$27,368.16
		9	2	21.175	10.588	\$0.00	\$0.00
S	G	7	6	66.682	11.114	\$7.17	\$43.02
		8	8	115.148	14.394	\$15.35	\$122.80
		9	118	1376.221	11.663	\$0.00	\$0.00

DEFENSE DEPOT TRACY, CALIFORNIA

	<b>S</b>	<b>7</b>	<b>270</b>	<b>3717.989</b>	<b>13.770</b>	<b>\$7.61</b>	<b>\$2,054.70</b>
		<b>8</b>	<b>168</b>	<b>2005.707</b>	<b>11.939</b>	<b>\$9.74</b>	<b>\$1,636.32</b>
<b>T</b>	<b>G</b>	<b>8</b>	<b>17</b>	<b>223.905</b>	<b>13.171</b>	<b>\$10.22</b>	<b>\$173.74</b>
		<b>9</b>	<b>15</b>	<b>102.828</b>	<b>6.855</b>	<b>\$0.00</b>	<b>\$0.00</b>
	<b>S</b>	<b>8</b>	<b>397</b>	<b>5641.702</b>	<b>14.211</b>	<b>\$8.48</b>	<b>\$3,366.56</b>
<b>U</b>	<b>G</b>	<b>1</b>	<b>5</b>	<b>105.160</b>	<b>21.032</b>	<b>\$3.06</b>	<b>\$15.30</b>
		<b>7</b>	<b>4</b>	<b>88.660</b>	<b>22.165</b>	<b>\$10.24</b>	<b>\$40.96</b>
		<b>8</b>	<b>22</b>	<b>486.662</b>	<b>22.121</b>	<b>\$16.11</b>	<b>\$354.42</b>
	<b>S</b>	<b>7</b>	<b>184</b>	<b>2332.682</b>	<b>12.678</b>	<b>\$6.57</b>	<b>\$1,208.88</b>
		<b>8</b>	<b>569</b>	<b>6398.865</b>	<b>11.246</b>	<b>\$11.84</b>	<b>\$6,736.96</b>
<b>V</b>	<b>G</b>	<b>1</b>	<b>2</b>	<b>6.116</b>	<b>3.058</b>	<b>\$1.81</b>	<b>\$3.62</b>
		<b>8</b>	<b>38</b>	<b>400.510</b>	<b>10.540</b>	<b>\$13.09</b>	<b>\$497.42</b>
		<b>9</b>	<b>249</b>	<b>3427.644</b>	<b>13.766</b>	<b>\$0.00</b>	<b>\$0.00</b>
	<b>S</b>	<b>2</b>	<b>1</b>	<b>18.700</b>	<b>18.700</b>	<b>\$2.88</b>	<b>\$2.88</b>
		<b>3</b>	<b>4</b>	<b>89.397</b>	<b>22.349</b>	<b>\$3.18</b>	<b>\$12.72</b>
		<b>5</b>	<b>2</b>	<b>5.148</b>	<b>2.574</b>	<b>\$2.11</b>	<b>\$4.22</b>
		<b>8</b>	<b>850</b>	<b>10432.202</b>	<b>12.273</b>	<b>\$11.84</b>	<b>\$10,064.00</b>
<b>W</b>	<b>G</b>	<b>8</b>	<b>13</b>	<b>119.845</b>	<b>9.219</b>	<b>\$15.35</b>	<b>\$199.55</b>
		<b>9</b>	<b>312</b>	<b>3137.464</b>	<b>10.056</b>	<b>\$0.00</b>	<b>\$0.00</b>
	<b>S</b>	<b>1</b>	<b>1</b>	<b>6.182</b>	<b>6.182</b>	<b>\$1.80</b>	<b>\$1.80</b>
		<b>5</b>	<b>4</b>	<b>42.372</b>	<b>10.593</b>	<b>\$3.05</b>	<b>\$12.20</b>
		<b>8</b>	<b>588</b>	<b>7655.208</b>	<b>13.019</b>	<b>\$22.79</b>	<b>\$13,400.52</b>
<b>X</b>	<b>G</b>	<b>9</b>	<b>49</b>	<b>597.443</b>	<b>12.193</b>	<b>\$0.00</b>	<b>\$0.00</b>
	<b>S</b>	<b>9</b>	<b>29</b>	<b>341.748</b>	<b>11.784</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Y</b>	<b>G</b>	<b>4</b>	<b>18</b>	<b>300.651</b>	<b>16.703</b>	<b>\$4.67</b>	<b>\$84.06</b>
		<b>5</b>	<b>4</b>	<b>145.244</b>	<b>36.311</b>	<b>\$5.75</b>	<b>\$23.00</b>
	<b>S</b>	<b>4</b>	<b>47</b>	<b>500.951</b>	<b>10.659</b>	<b>\$7.01</b>	<b>\$329.47</b>
		<b>5</b>	<b>108</b>	<b>1456.598</b>	<b>13.487</b>	<b>\$8.58</b>	<b>\$926.64</b>
<b>Z</b>	<b>G</b>	<b>5</b>	<b>12</b>	<b>220.891</b>	<b>18.408</b>	<b>\$6.60</b>	<b>\$79.20</b>
	<b>S</b>	<b>2</b>	<b>5</b>	<b>60.412</b>	<b>12.082</b>	<b>\$2.34</b>	<b>\$11.70</b>
		<b>5</b>	<b>158</b>	<b>2307.984</b>	<b>14.607</b>	<b>\$12.41</b>	<b>\$1,960.78</b>
<b>TOTAL</b>			<b>13099</b>	<b>170784.756</b>			<b>\$115,104.60</b>

**\$100,586.07 SAVINGS AT DDTG FOR A TYPICAL 45 DAY PERIOD**

**46.63% PER CENT SAVINGS**

**\$804,688.56 SAVINGS AT DDTG FOR A TYPICAL YEAR**

**\$4,828,131.36 SAVINGS AT ALL 6 DLA DEPOTS FOR A GIVEN YEAR**

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

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19. ABSTRACT (Continue on reverse if necessary and identify by block number) This report summarizes the work done and conclusions reached in a study of depot low priority shipment consolidation effectiveness. IPG III requisitions for compatible items and with the same destinations are consolidated to make maximum use of transportation and warehousing funds. This process is highly automated but frequently the oldest requisition is removed from the shipment data bank before the routine drop date. The resulting consolidation is thus smaller than it would have been under ideal conditions. The model constructed for this study emulates the consolidation process. The optimization of the consolidation process assumes a perfect system but can still be a useful tool in determining effectiveness trends at the Defense Logistics Agency supply depots. For a typical depot in a 45-day period this model shows that under optimal conditions, small parcel shipments could be reduced in excess of 63 percent.			
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