Reporting, Recording, and Transferring Contingency Demand Data

AFLMA FINAL REPORT LS199924300

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The recent war efforts in Kosovo have highlighted specific problems with reporting, recording, and transferring reparable spares demand data. There are currently no standard procedures for managing contingency demand data. How should wartime failures be recorded? When should demand that occurred at the contingency base be transferred to the home station? How should the data be transferred? Improper recording and reporting of failure data can (and does) affect how levels are allocated and how both peacetime and wartime requirements are computed. In this report, we develop a standard set of procedures for reporting and recording demand data at the contingency location and transferring contingency demand data to the home base – ensuring proper level allocation and valid worldwide peacetime operating stock (POS) and readiness spares package (RSP) requirements.

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EXECUTIVE SUMMARY

BACKGROUND

The recent war efforts in Kosovo highlighted specific problems with recording, reporting, and transferring reparable spares demand data. If home (transferred from) bases don't properly record failure data that occurred at the contingency site, worldwide Readiness Based Levels (RBL) could be skewed. Properly reported failures will ensure the spares available will be prioritized and properly distributed. Improper recording and reporting of demand data can effect the accuracy of base levels and the worldwide peacetime operating stock (POS) and readiness spares package (RSP) requirements. During Kosovo, two Major Commands, HQ USAFE and HQ ACC, were recording and reporting contingency demand data differently. Both had their own locally devised programs to gather the data for transfer, but both transferred the data at different times.

PROBLEM STATEMENT

The Air Force has no clear, concise procedure for reporting and recording demand data at the contingency location and transferring contingency demand data to the home base, to ensure proper level allocations and valid worldwide POS and RSP requirements.

STUDY OBJECTIVES

1. Determine the current procedures (both formal and informal) for reporting failure data.
2. Define what procedures are needed to properly record, report and transfer contingency demand data.
3. Identify shortfalls between current procedures and desired results.
4. Develop system requirements – how to achieve desired results.
5. Document proposed procedures for the system.

CONCLUSIONS

1. There is no standard procedure for recording, reporting, and transferring contingency demand data.
2. There is no standard program to collect transferred unit data and update home base records. The ACCL73 currently collects demand data to transfer.
3. There is no supply Transaction Identification Code (TRIC) to accurately update the Standard Reporting Designator (SRD) consumption records.
4. There is no method to separate peacetime and wartime demands.
5. The Air Force Wartime Supply Policy Working Group approved transferring demand data when the weapon system returns to their home base.
6. The base closure flag suits the need better than maximum levels of zero for suppressing contingency levels.

RECOMMENDATIONS

1. Approve and post our proposed procedures (Appendix A) for AFMAN 23-110, Volume 2, Part 2, Chapter 26, Section O, Contingency Demand Data Recording, Reporting, and Transferring (Appendix A). The proposed procedures are based upon the AFWSPG recommendations and the ACC L73 program. (OPR: USAF/ILSP)
2. As an interim, post the ACC L73 SURGE program on a web site along with the documentation to process the program (OPR: ACC/RSSM) and mandate its use (OPR: USAF/ILSP).
3. Enhance the L73 to (a) produce dynamic files based upon the input parameters and (b) produce the FCL/FRR files to subtract the transferred demands from the contingency site records (Appendix C). (OPR: ACC/RSSM)
4. Using the ACC L73 as a guide, develop a permanent SBSS program(s) to perform the same functions with our proposed enhancements. (OPR: USAF/ILSP OCR: SSG/ILS)
5. Develop a supply TRIC to add/delete/update the SRD consumption records. (OPR: USAF/ILSP OCR: SSG/ILS)
6. Modify RBL to allocate base levels separately from Contingency High Priority Mission Support Kit (CHPMSK) levels. (OPR: AFMC/LGI and AFLMA/LGS)
7. Upon completion of the contingency, MAJCOMs should use the RBL Central Leveling Summary (CLS) to identify and delete any levels or demand changes for any RBL NSNs at the contingency base for weapon systems that are no longer assigned to that base. (OPR: ACC, USAFE, and PACAF)
8. Upon elimination of a CHPMSK at a location that no longer supports the weapon system, use the RBL CLS to ensure all demand and levels data is purged from the SBSS and CLS files. (OPR: Air Force Requirements Team AFLMA/LGS and AFMC/LGI)
9. Implement a system to ensure 7WS transactions are received from all bases. (OPR: AFMC/LGI OCR: SSG/ILS)
10. Develop procedures for identifying and separately recording wartime from peacetime demands. (OPR: USAF/ILSP)
11. Modify the SBSS to identify a stock number with a base closure flag to RBL via the XCB transaction. (OPR: USAF/ILSP OCR:SSG/ILS)
12. Modify RBL to accept the (stock number) base closure flag and treat it as a maximum level of zero. (OPR: USAF/ILSP OCR: AFMC/LGI)
13. Modify the logic for manual stock number deletion during FID processing to include deleting item records with a maximum level of zero detail (type detail "E"). (OPR: USAF/ILSP OCR: SSG/ILS)

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CHAPTER 1

INTRODUCTION

BACKGROUND

The recent war efforts in Kosovo highlighted specific problems with recording, reporting, and transferring reparable spares demand data. If home (transferred from) bases don't properly record failure data that occurs at the contingency site, worldwide Readiness Based Levels (RBL) could be skewed. The location of the failure isn't important to the D041 system, but it is important for RBL to allocate levels. Properly reported failures will ensure the spares available will be accurately prioritized for repair and properly distributed. Problems with levels allocation will occur if levels are allowed to build in two locations using the same demand data (e.g., contingency site and transferred data at the home base). During Kosovo, two Major Commands, HQ USAFE and HQ ACC, were recording and reporting contingency demand data differently. Both had their own locally devised programs to gather the data for transfer, but both transferred the data at different times.

There are *no* programs or procedures in AFMAN 23-110 to describe collecting and transferring reparable demand data from the contingency site to the home base. The only reliable method currently available is a locally written Supply Users Report Generator (SURGE) program developed by Technical Sergeant Michael Garris at the ACC Regional Support Squadron (RSS), but the timing for transferring the data is still an issue. The absence of standard reporting procedures resulted in reporting complications during deployment.

For example, should units transfer the data to the home Stock Record Account Number (SRAN) after the contingency ended, or when the aircraft return? The home bases will have all the proper demand data updated for base levels – but if the aircraft rotated home before the end of the contingency, the home base's demands did not include the demands the aircraft experienced while transferred to the contingency location.

Headquarters ACC was transferring the data back to the home SRAN when the units returned from the contingency. Their program took all the item record demands from the contingency site and placed them in the item records at the home base. The repair cycle records had the proper quarterly numbers updated as well as adding the contingency Standard Reporting Designator (SRD) totals to the home base SRD totals. However, this could result in duplicate reporting to D041 if reporting occurred within the same quarter and the transfer of the contingency records weren't adjusted before the quarterly D28. If the contingency host base used items in common with the gaining (transferred) unit, it is possible the contingency base levels are inaccurate if the home base's demand data was deleted at the contingency site.

Another complication arising from the Kosovo war was that there was no standard demand code used by all contingency units. Some units used a non-recurring demand code because peacetime operating stock (POS) levels were not desired at the contingency site. AFMAN 23-110, Vol 2,

Part 2, attachment 11A-8 describes the non-recurring demand code as "anticipated to be nonrepetitive", which is correct at the contingency site but not for the Air Force in general. Recording demands as non-recurring will preclude those failures from being reported to RBL for levels allocation. Non-recurring demands are not counted as demands against supply so the demands are not accrued on the item record nor is the repair cycle data maintained on the repair cycle record. In short, the failure data will not be recorded or reported to RBL or to D041 via the quarterly (7WS) report. However, non-recurring failures are reported via DAC transactions from the SBSS to D041, but the 7WS has replaced the DAC as the source of failure data to D041.

The ACC/LG recognized the many questions and problems that occurred with the Kosovo contingency demand data and tasked the AFLMA to develop new (standard) procedures for recording, reporting, and transferring contingency demand data.

PROBLEM STATEMENT

The Air Force has no clear, concise procedure for reporting and recording demand data at the contingency location and transferring contingency demand data to the home base, to ensure proper level allocations and valid worldwide (POS and RSP) requirements.

STUDY OBJECTIVES

1. Determine the current procedures (both formal and informal) for reporting failure data.
2. Define the procedures to properly record, report and transfer contingency demand data.
3. Identify shortfalls between current procedures and desired results.
4. Develop system requirements – how to achieve desired results.
5. Document proposed procedures for the system.

CHAPTER 2

CURRENT SYSTEM

OVERVIEW

In this chapter, we examined AFMAN 23-110 to determine current supply procedures for recording, reporting, and transferring reparable spares demand data. We contacted the MAJCOMs to determine current procedures they have developed (if any) for recording, reporting, and transferring demand data. In the third section, we determined what the system should (must) do.

CURRENT AIR FORCE PROCEDURES

AFMAN 23-110, Vol 2, Part 2 describes procedures for proper recording and reporting of reparable spares demand data, but there is no mention of differences between contingency and home base processing. Actually there is no mention of specific *contingency* processing (as it relates to reparable demand data) or *transferring* of contingency demand data from the sites to the home base.

Proper demand data is necessary for requirements computation (D041), proper RBL allocations (D035E), and accurate Readiness Spares Package (RSP) computations. All three processes are crucial to the Air Force war-fighting effort. Any glitches in one of these three processes – D041, RBL, or RSP computations – can lead to ineffective wartime support and inaccurate peace and contingency requirements. To accurately define a contingency demand data system, we need to better understand the current demand data feeds and needs – failure data sent to the D041 system, demand rates used for levels allocation (RBL), and demand rates used for RSP computation.

D041 Failure Data

The D041 is the requirements computation part of a larger process used to determine which base will get which parts. It relies on reports from the Standard Base Supply System (SBSS) to get failure data so it can compute requirements accurately. The SBSS reports failure and usage data via a daily report, the D28 Recoverable Assembly Management Processing System (RAMPS) report, to the Air Force Materiel Command (AFMC) systems (see Figure 1).

The SBSS reports failure data to the D041 system with two SBSS transaction identification codes (TRICs), but different timing (daily and quarterly). The DAC transactions report (on a daily basis) any change in the reparable asset condition via the D28. The D041 also collects 7WS transactions from the SBSS during the quarterly run of the D28. The 7WS contains basically the same failure data for recurring demands from the item and repair cycle record as the daily DACs, but in a single and more accurate transaction. The 7WS is the primary TRIC of the SBSS-to-D041 reporting because it is a single snapshot of the failure for the previous 90 days. In the

event the 7WS doesn't arrive or is corrupted, the D041 uses the accumulated daily DAC transactions from the SBSS.

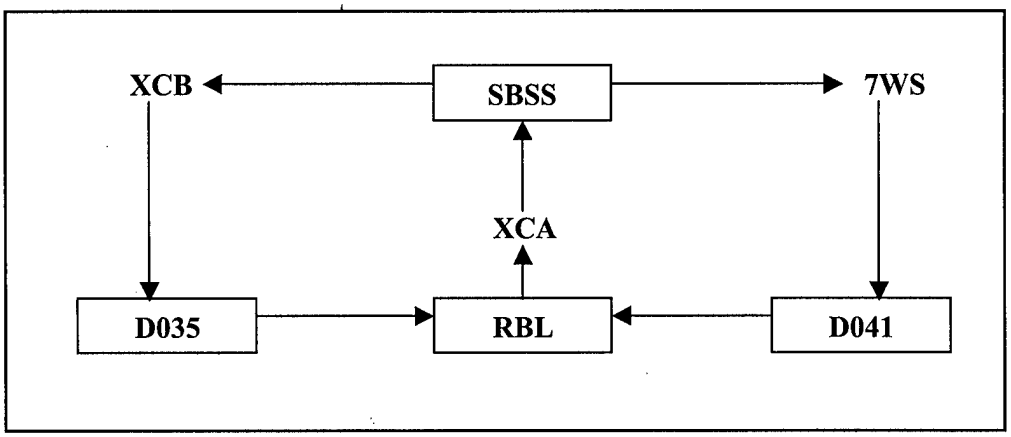

Figure 1, RBL Systems Interface

There is a real danger of reporting failures twice with the DAC and 7WS transactions when the contingency unit takes the applicable demands back to their home station and the *home station* reports via the 7WS (at end of quarter) and the *contingency location* reports the same failures via the DAC (daily). The Air Force Logistics Management Agency (AFLMA) report LS199810300, *Comparison of Repair Cycle Item Failure Data (7WS Versus DAC),* showed the 7WS was more reliable and more accurate than the DAC. The AFLMA report also recommended the development of an automated system to ensure 7WS images are received from all bases (this will alleviate the fear of reporting twice!). The report further recommended a system change to add *all* failure data to the 7WS (especially recurring failures that are coded as non-recurring) and using the 7WS as **the** source for failure data for the D041 worldwide requirements computation.

Unfortunately, many Kosovo part requests were recorded as non-recurring and the subsequent demand/usage data was not reported properly on the 7WS from the contingency sites. The USAFE-modified ACCL73 picked up all non-recurring demands and loaded the demand data at the home base as recurring for proper quarterly reporting via the 7WS, but this only works if the data is transferred before the end of each quarter. Using a recurring demand code is crucial to collecting and reporting valid demand data to the D041 system.

RBL Usage Data

Another crucial factor for demand data reporting is proper level allocations from RBL. RBL takes the D041 requirement and allocates the worldwide requirement to each using base to minimize worldwide expected backorders (EBO). The allocation of levels relies on properly recorded demands (recurring demand) and proper SBSS D28 reporting to the AFMC systems (via an XCB transaction).

Levels allocation is based upon the daily demand rates reported to RBL (D035E) via the XCB transaction from the SBSS (see Figure 1). The XCB is generated every time the SBSS performs file status on a reparable National Stock Number (NSN). File status will be performed on all NSNs *at least* once a quarter giving RBL a picture of each reparable NSN's demand rates for the quarterly levels computation. In the event RBL doesn't have a current XCB for a SRAN, it will send an XCD to the base. When the XCD processes in the SBSS it automatically generates an XCB for RBL.

The SBSS computes the daily demand rate using all recurring demands. Some units did not want RBL levels at the contingency site and therefore used non-recurring demand. This skews worldwide requirements data, so some other method must be used to prevent unneeded RBL levels.

Wartime Requirements (RSP) Failure Data

Recorded demand data is critical to proper RSP computations. The Air Force uses the SBSS demand data to review worldwide demand rates and if appropriate, use the base rates to compute RSP. Theoretically, the best source of contingency failure data is failure data collected during an actual contingency. Since RSPs are computed by weapon system, the SRD consumption records are used for the review. Again, as long as each base records the data correctly (proper demand code, SRD, etc.) the RSP calculation will be as accurate as possible for that base.

The RSP computations are based upon the demand rates stored on the SRD consumption records. The consumption records are updated when the Daily SRD Update (D13) is processed by the SBSS. Specific transactions are selected (AFMAN 23-110, Vol 2, Part 2, Attachment 5B-13) and the demands are updated according to the NSN and SRD of the selected transaction. There has been much discussion about the accuracy of the SRD consumption records. When a transaction is processed for an SRD that is loaded, but invalid for the specific NSN of the transaction, the updates are still applied to the NSN/SRD combination of the transaction. For instance, NSN 1 is processed for SRD ABA even though the proper SRD is AB1. The D13 will store the demands against NSN 1/ABA on the SBSS and RSP computations will be based upon this data even though the correct SRD is AB1 – this is why using the correct SRD on every transaction is absolutely essential. Problems with the A01, SRD Update program are discussed in the next chapter.

The Air Force needs accurate data on which to compute base levels and peacetime and wartime spares requirements. It begins with recording the data accurately and in a timely manner.

"Wartime" Versus "Peacetime" Demands

The SBSS has no method or procedures to identify and separately store wartime (contingency) data from peacetime data. The Air Force records all demands the same. In essence, the Air Force contaminates the failure data by not segregating the wartime demands. By segregating the data, the Air Force can use wartime failures to forecast wartime requirements. Further, the Air Force will not inflate peacetime consumption, and therefore peacetime requirements, for items used more heavily in wartime sorties.

The Air Force needs a method to identify and separately store wartime and peacetime demand data for accurate peacetime levels and wartime forecasts. We discuss options to identify and store wartime and peacetime data in the next chapter.

CURRENT MAJCOM PROCEDURES

A couple of similarities exist between all bases that currently transfer to contingency sites. They all transfer with their RSP and possibly a Contingency High Priority Mission Support Kit (CHPMSK – see AFMAN 23-110, Vol 1, Part 1, Chapter 14, Section E for CHPMSK guidelines). However, there are key differences as noted in Table 2-1 below.

	Normal Contingency Actions	**Kosovo Actions**
Max levels zero	*Yes**	*No**
DAC	*From contingency location*	*From contingency location*
7WS	*From home base*	*From contingency location*
L73	*Yes, when unit transfers home*	*Yes, when contingency is over*
Demands	*Recurring*	*Non-recurring* **

Table 2-1, Contingency Processing Differences

*Yes when the transferring unit falls into a base with different weapon systems. No when the transferring unit falls into a base with the same weapon systems.
** It is not standard practice to use non-recurring demand codes, yet many units from all MAJCOMs that deployed for Kosovo chose to use non-recurring. There is currently no Air Force policy dictating demand code usage during contingencies.

As Table 2-1 shows, the main differences are whether to have base POS levels at the contingency site and when to transfer the demand data. The differences can have an impact on RBL allocations and thus the ability to get the needed parts to complete the mission. Before we discuss differences, we need to discuss demand codes.

Non-Recurring Demand

Some units recorded demands as non-recurring. As discussed earlier, this will keep the reparable asset demands from being recorded in the SBSS and keep RBL from allocating to the location -- impairing the ability to get the part to complete the mission. The failure will still be reported to D041 via the DAC. Contingency demands for items that will be needed again to support the weapon system (that will recur) must not be coded as non-recurring just because the weapon

system is deployed. The base must use the recurring demand code and find a different method (max level of zero) if it wants to prevent the establishment of base levels at the contingency site.

Base POS Levels

We propose using a maximum level of zero to prevent the contingency SBSS from having POS (RBL or repair cycle demand levels). There could be many reasons for wanting to suppress base POS levels at a location (e.g., political, storage, security), but the method should be simple, standard, and effective. Some units loaded a maximum level of zero against certain stock numbers to prevent the establishment of a level for that stock number. This method must be loaded to every NSN that must have levels suppressed. Maximum levels of zero essentially tells RBL to allocate the parts elsewhere because the base has no need for any, even though demand data has accrued (before or during the transfer). We discuss level suppression more deeply in chapter 3.

When to Transfer Data

Some units transferred the demand data after the contingency, while others upon return of the unit to its home base. This could result in lost, misrouted, or duplicate demand data. When the timing is based upon the command of the deployed unit or the command of the contingency personnel, the potential for lost data files only increases. The demand data should be reported where the weapon systems are and where the levels are needed.

Collecting the Data to Transfer

What actions are taken upon unit return? Under the current SBSS procedures, there are no standard procedures for transferring the demand data back to the home base. ACC has developed a local SURGE, the ACC L73, to transfer the contingency demand data. All MAJCOMs use the L73 because it is the only program available to move demand data from contingency sites to the home base. The L73 builds files to move item record demand data, repair cycle data, and SRD consumption data to the home base.

ACC L73 PROGRAM

The ACC L73 is a SURGE program that collects the demands from the contingency site, separates the data for transfer to the home base, and provides SBSS TRICs that generate updates to RBL. It pulls data from the contingency database using specific input parameters for each unit. Using the deployment start/end dates, the SRD, the system designator and the organization code at the deployed sites – the L73 will build several files to transfer data to the home base.

The first two files are the FCL and FRR images to update the item record demand data and repair cycle records respectively. These images are built by scanning the Consolidated Transaction History (CTH) records at the contingency site. Using the parameters discussed above, all transactions that update item record demands and the repair cycle record are located and totaled. Note the program can and does collect non-recurring demands as well as recurring demands. The

L73 produces a single image for each NSN per TRIC. The images must be processed at the home base SBSS to update home base records (Appendix A). In order to complete the process, the same files (FRR and FCL) must be reformatted to subtract the demands being transferred from the records at the contingency site. We recommend enhancing the L73 to produce these additional FRR and FCL files.

The next file (XCD file) prompts the SBSS to update RBL with the asset usage data to ensure proper levels allocation. The program creates XCDs for each NSN that has had a change in its demand data. The XCD image is a daily demand rate (DDR) confirmation request and it generates a report of the most recent data to RBL for levels computation. By processing the XCDs generated by the L73, the host account saves 2 – 3 days of processing time because they don't have to run file status to generate the reports for all of the reparable NSNs.

The final file generated is for SRD consumption record updates. The L73 reads the home base records and compares them with the contingency site totals to build a file of new, summed totals by NSN – the home base data is not overlaid with the contingency data. By adding the contingency totals to the home base numbers we get a more accurate picture of specific NSNs required during wartime operations.

There is a slight drawback to processing the SRD file with the L73. Since there is no available supply TRIC to apply the changes to the database, the home base remote processing station (RPS) must have access to Query Language Processing (QLP)/Update to complete the SRD updates. It usually requires MAJCOM permission to use QLP/Update because it is a controlled "file alteration" program. The changes applied to the SRD records allow the bases the most accurate picture possible for RSP computations.

Another drawback to the L73 is only one organization and/or SRD combination can be used at a time. If multiple SRDs or organizations are used during the contingency then the L73 must be processed multiple times. We recommend enhancing the L73 to create unique files based upon the input parameters (see Appendix C for sample code).

A copy of all files used for demand data transfers should be transmitted to the MAJCOM hosting the contingency. The MAJCOMs will furnish the demand data files to the AFLMA (Requirements Team) each time there is a CHPMSK review/validation.

The transferred demand data files are the only (and best!) source of wartime data. Ideally, a specific agency or group should be appointed by HQ USAF/ILS to collect and maintain all wartime data. The AFLMA has been the data collector/warehouser for the last two major contingencies and should maintain this role.

WHAT THE SYSTEM SHOULD DO

We have explained the current procedures the Air Force uses to compute levels and RSPs. We also pointed out the different types of failure data and the effect failure data has on Air Force systems. Finally, we discussed local procedures used by two MAJCOMs (ACC and USAFE) to

transfer data to home bases. Now we need to determine what a contingency demand data system should do.

1. A contingency demand data system should use a standard set of procedures. The procedures should include accurate data feeds to the Air Force requirements systems. There are three purposes for accurately collecting and reporting contingency data:

   Levels Allocation- **demand data must be maintained at the location which needs POS (RBL) levels.** If the weapon systems are located at the contingency site, then the demands are initially recorded and reported from the contingency site. However, a decision must be made as to which POS levels are needed at contingency sites. **There must be the capability to handle the exceptions when base POS levels are not required at the contingency site.** For example, ACC units deploying to Saudi Arabia were not allowed "permanent" levels. In Southwest Asia, ACC used RSPs and CHPMSKs with no base POS level (RBL, RCDL, or ASL) and they loaded maximum levels of zero at their contingency sites. USAFE, on the other hand, had units transfer in to bases with like weapon systems loaded and an RBL level already loaded. In those cases, the transferred unit could use its RSP and CHPMSK for support, but the contingency site home unit still needed its POS level. One added complication, the contingency unit that transferred to the USAFE base will record failures (satisfied from the CHPMSK), but those failures should not be counted for the contingency home unit's levels even though they are reported at that location.

   POS Requirements – The Air Force requirements computation system (D041) needs failure data to accurately compute requirements. A recurring failure is one that is likely to recur. Failures caused by unusual events (aircraft mishaps) and certain repair (materiel/quality deficiency report) actions are non-recurring. Note transient aircraft part failures are really recurring from an Air Force level view even though bases are instructed to use a non-recurring demand code because the items shouldn't normally be stocked at the contingency site. D041 needs all failures reported and must make a distinction between recurring, recurring non-recurring (i.e., transient aircraft) and non-recurring failures. Currently, the SBSS sends only recurring failure data to D041 quarterly (at the end of the quarter) via the 7WS transaction. In the event AFMC does not receive the 7WS from a base, D041 uses DAC transactions which report both recurring and non-recurring failures daily (as failures occur). D041 uses summed failure data (the overall total from all SRANs) - it does not need failures identified to the SRAN level. The 7WS must report all "recurring" demands to D041. It doesn't matter whether the contingency site or the home base reports the data as long as they don't duplicate the data. Note if a unit returns to home base and transfers its contingency data to the home base (as ACC is doing), then the sum of a SRAN's DACs will not equal the 7WS failures. The DACs would have been reported from the contingency site and the 7WS from the home station. This points out the need for the D041 to use the 7WS and for AFMC to ensure it receives all the 7WS images from the bases. **Using DACs from one base and 7WS for another could duplicate demand data.**

RSP Requirements – Annually, the Air Force computes RSP requirements and attempts to use failure rates that most accurately reflect contingency operations by weapon system by squadron. Theoretically, contingency demand data would be the best source of failure to forecast wartime requirements. **So a contingency demand data collection system should record and maintain demand data by weapon system (i.e., accurate SRD consumption records) and the Air Force should segregate actual contingency demand data separately from peacetime SRD data.**

2. The system should be able to prevent establishing base POS levels, but must record demand data for transfer to the home station.

3. The system should facilitate the deletion of stock number records (adjusted levels and item records) automatically at the end of the contingency (file status and item record deletion criteria).

4. A contingency demand data system must be automated and simple to use. The major concerns are the ease of procedures to prevent base levels, transfer demand data, allocate proper levels, and clean up contingency records. Contingencies are not the time for an increase in the workload.

5. The are some specific issues with "wartime" versus "peacetime" rates. Should the base load contingency rates (wartime) onto home base (peacetime) item and repair cycle? Should the base report contingency demand data *unfiltered* to D041? There could be some climatic or operational tempo differences to consider. The Air Force should have the ability to adjust base and wholesale contingency failure data. The Air Force should also have a method to segregate wartime from peacetime demand rates.

6. Store all wartime data for specific wartime computations and use peacetime data for peacetime levels allocations. Separate accumulators on the SBSS for wartime and peacetime data would provide the flexibility needed to store all data in the same system for both wartime and peacetime calculations.

CHAPTER 3

SYSTEM REQUIREMENTS

PROPOSED REQUIREMENTS

Identify contingency data by SRD and/or organization code

An accurate contingency demand recording and reporting system should identify the contingency data by SRD and/or organization code at the contingency site. It should then transfer (delete) item record, repair cycle and mission change data from the contingency site and load, change or delete the data (as appropriate) at the home base. The SBSS has two standard TRICs capable of performing these changes to the item and repair cycle records – the FCL and the FRR respectively. The system would have to automatically generate these TRICs to transfer contingency demand data.

Retrieve contingency SRD consumption data by NSN/SRD and *add* it to home base data

Another requirement is to retrieve contingency SRD consumption data by NSN/SRD and *add* it to home base SRD data. There is no current TRIC to perform this process. There is an SBSS report, the A01 SRD File Update that will transfer the data. However, the A01 does not meet our needs; it does not *add* the demand data to the specific NSN records. Instead, the A01 loads the SRD demand data across an SRD to all NSNs equally at the home base. An example of this is found in Table 3-1.

Table 3-1 provides an example of a home base with 15 NSNs (prior to any updates) for a single SRD and a contingency site with 45 total demands across 10 different NSNs for the same SRD. Processing the A01 would average the 45 demands over all NSNs at the home base with the same SRD (far right column of Table 3-1) and all 15 NSNs would gain demands on each NSN – even the NSNs with no demands accrued during the contingency (column 3 of Table 3-1 shows the desired effect of SRD consumption record updates). By comparing the derived totals of the desired effect and the A01 effect, you can see the difference in the demand data that would be used to compute RSP. NSN 5 had no demands at the home base and none during the contingency, but would receive 3 demands from the A01 and would probably have assets in the next RSP computation. On the other hand, NSN 7 was the leading requirement during the contingency and would definitely be stocked if all demands were applied to that NSN (desired effect). However, the A01 would average the demands and make this NSN demand data much smaller than actual consumption. **The Air Force needs a better method to load contingency demand data by NSN to the home base SRD record than the current A01 process.**

Home Base (before updates)	Contingency Site (actual demands)	Home Base (desired effects)	Home Base (after the A01)
NSN1 (1 dmd)	NSN1 (8 dmds)	NSN1 (1+8= 9 dmds)	NSN1 (1+3= 4 dmds)
NSN2 (2 dmds)	NSN2 (5 dmds)	NSN2 (2+5= 7 dmds)	NSN2 (2+3= 5 dmds)
NSN3 (2 dmds)		NSN3 (2 dmds)	NSN3 (2+3= 5 dmds)
NSN4 (1 dmd)	NSN4 (4 dmds)	NSN4 (1+4= 5 dmds)	NSN4 (1+3= 4 dmds)
NSN5 (0 dmds)		NSN5 (0 dmds)	NSN5 (0+3= 3 dmds)
NSN6 (3 dmds)		NSN6 (3 dmds)	NSN6 (3+3= 6 dmds)
NSN7 (2 dmds)	NSN7 (9 dmds)	NSN7 (2+9= 11 dmds)	NSN7 (2+3= 5 dmds)
NSN8 (1 dmd)	NSN8 (1 dmd)	NSN8 (1+1= 2 dmds)	NSN8 (1+3= 4 dmds)
NSN9 (3 dmds)	NSN9 (6 dmds)	NSN9 (3+6= 9 dmds)	NSN9 (3+3= 6 dmds)
NSN10 (2 dmds)	NSN10 (2 dmds)	NSN10 (2+2= 4 dmds)	NSN10 (2+3= 5 dmds)
NSN11 (1 dmd)	NSN11 (3 dmds)	NSN11 (1+3= 4 dmds)	NSN11 (1+3= 4 dmds)
NSN12 (5 dmds)		NSN12 (5 dmds)	NSN12 (5+3= 8 dmds)
NSN13 (4 dmds)		NSN13 (4 dmds)	NSN13 (4+3= 7 dmds)
NSN14 (0 dmds)	NSN14 (2 dmds)	NSN14 (0+2= 2 dmds)	NSN14 (0+3= 3 dmds)
NSN15 (1 dmd)	NSN15 (5 dmds)	NSN15 (1+5= 6 dmds)	NSN15 (1+3= 4 dmds)
15 NSNs prior to updating with contingency demand data	10 NSNs with 45 total demands	Each *specific* NSN within an SRD summed by NSN (add contingency demands)	45 demands averaged over *ALL* 15 NSNs within the SRD (add 3 to each NSN)

Table 3-1, Adding Contingency SRD Demands to Home Base NSNs

Use a standard method of suppressing POS levels at contingency sites

An accurate system should use a standard method of suppressing/limiting POS levels at contingency sites when applicable. Note base POS (RBL) levels are required if the contingency base supports the same weapon system (or uses common items) as the unit transferring to that base. So preventing base levels only applies to different weapon systems and non-common items. However, we may need to limit POS levels (not just transferred unit's levels). We also need to determine the impact that any POS level suppression method has on D041 and RBL for host base and contingency site support.

Base Closure Flag - Some units discussed using the base closure flag to prevent levels allocation. It meets the needs of the contingency base because it is easy to load and remove and it works for all assets whether they are reparable (RBL) or consumable. The base closure flag prevents the SBSS from requisitioning for POS levels, but it will still requisition for any special levels and/or due-out requirements. **Although the base closure flag works well for consumable assets, it**

has a negative impact on RBL. RBL will still allocate the level to the contingency SBSS NSNs, but the SBSS will ignore the level and will not report the lost level(s) to RBL. Unfortunately, RBL doesn't reallocate the level(s) originally allocated to the contingency SBSS NSNs with the base closure flag – those allocations are lost for the entire quarter.

Maximum Level of Zero – The preferred method of suppressing levels is the use of maximum level of zero details, primarily because it works well with RBL. RBL will not allocate a positive level to a base with a maximum level of zero. A maximum level of zero works well with all assets (reparable and consumable) and it meets the need of the contingency base. It is a little more difficult to clean up at the end of the contingency because item records with max levels are not automatically deleted via file status processing or item record deletion.

Short Term Solution – Load the base closure flag to all contingency stock numbers (reparable and consumable) that are new record loads to the contingency host base (different weapon system than the contingency host site) and do not require a base POS level. However, load the maximum level zero details to only the RBL (reparable) assets as well. This is the only solution that does not require a system (RBL and/or SBSS) change. It does require some additional base workload (to load and delete the maximum level). Although not a short-term solution, we recommend HQ SSG modify the SBSS to allow deletion of records with a maximum level zero detail (type detail "E") with file status or manual record deletion (FID transaction). This change will prevent the base from having to delete the maximum levels after the unit returns home.

HQ AMC concerns – HQ AMC uses the maximum levels of zero in their Forward Supply System (FSS) accounts to suppress stockage in Forward Supply Locations (FSL) that don't have the maintenance expertise or storage space for certain items. AMC also consciously maintains the record once it has achieved the proper deletion criteria because it is a required item for the FSL. When an aircraft breaks down, the maintenance recovery team brings the asset with them to effect the repair.

HQ AMC also uses the maximum levels of zero in their FSL contingency accounts. They process their issue requests as recurring (to accrue the demand data), but they do not want to stock the item. By *not* deleting the items when they reach the automatic deletion threshold, they can further reduce the workload at the FSL contingency accounts by *not* having to load the stock number record. The record also has the re-supply requisition modifier and the override for repairable destination records already loaded (because it wasn't deleted), as well as maintaining demand data on the item. All these reasons give the contingency FSL the ability to maintain a "ready-to-go" condition.

Longer Term Solutions – Load the base closure flag to all applicable records. The SBSS will have to pass the base closure flag indicator to RBL (via the XCB). Finally, RBL will have to be modified to accept the base closure flag and treat it the same as a maximum level of zero. This longer-term solution will eliminate the need to load maximum levels of zero for recoverable items.

Clean-up program

A final requirement is for a clean-up program. **The program would identify NSNs that are erroneously loaded at a contingency site for a weapon system that is no longer at that location** (i.e., demand data on an F-15 NSN at an F-16 location). The RBL Central Leveling Summary (CLS) would be a useful tool to identify suspect demand data for Materiel Manager and MAJCOM review and subsequent clean up. We propose the AF Requirements Team and the MAJCOMs – USAFE, ACC, and PACAF – use the CLS to identify and delete any non-applicable demands and/or levels at the end of a contingency and/or the "final" departure of weapon systems from a contingency site. The process would identify any weapon system item (by system management code) with positive demand or a level for a weapon system no longer assigned to that base. The contingency site's host MAJCOM will use the list of any suspected erroneous demand and/or levels data for subsequent clean-up.

The AF Requirements Team will develop and process a program/procedure for CHPMSK validation and/or clean-up after contingencies. The program will be run at least upon elimination of a CHPMSK at a location that no longer supports the weapon system. The MAJCOMs will perform the clean-up process using the CLS for all cases except when the CHPMSK is deleted.

Additionally, SBSS programs need to be modified to delete stock numbers (with maximum level of zero details loaded) that qualify for deletion. For example, USAFE manually deleted over 10,000 stock numbers that didn't belong at contingency host accounts (after deleting all maximum level zero details). Once all the demand data has been subtracted from the stock numbers and transferred to the host bases, they should qualify for automatic deletion during file status processing. Unfortunately, only RBL details (type detail "F" and zero quantity) and life of system stock details (level justification code 0) are allowed to exist with a stock number *and* qualify it for automatic deletion under file status processing. The same logic exists for manual deletion of a stock number when using SBSS transactions (TRIC FID). We recommend adding (or changing the SBSS to include) maximum level of zero details (type detail "E") to the criteria for automatic stock number deletion during file status processing as well as FID processing.

PROPOSAL TO AF SUPPLY WARTIME POLICY GROUP (AFSWPG)

The AFLMA developed and proposed two options to the Air Force Supply Wartime Policy Group in November 1999. Both options require each unit transferred to a contingency site to segregate unit data (i.e., establish a separate organization code) and to record all demands as recurring. If the contingency (host) site is not using the NSN (the item is not applicable to weapon systems permanently assigned to the host site), then the contingency unit should load a maximum level of zero when the units transfer in. All support will come from the RSP and CHPMSK. If the item is currently being used at the host site, RBL will allocate to that base. RBL will not compute the CHPMSK level as part of the POS level. So the CHPMSK will be computed to support the unit transferring in and RBL will allocate a POS level for the normally assigned unit.

Option 1, Transfer upon unit return – Transfer the demand data upon return of the unit to its home base. If a new unit is to replace the unit leaving, then run a program to identify unit

specific demand data at the contingency site. Transfer (delete at the contingency site) the unit demand data and load at the home base. Leave the host base demand data as is, but delete the demand data generated by the unit that transferred.

Option 2, Transfer at the end of the contingency - All returning units involved "do nothing" for transferring demand data until the contingency is over (or annually). In other words, let all systems report the failures and accrue demand data under normal SBSS procedures. At the transfer point (annually or at the end-of-contingency) identify the unit demands, transfer the demand data to the appropriate home station and delete all "contingency demands" at the contingency base. Recompute the CHPMSK if it is the annual transfer of demand data and the contingency continues. If any CHPMSK was in use and was an annual transfer, the updated CHPMSK would provide the levels to the contingency site so there is no need to retain the demand data at the contingency location.

Evaluation of options - A concern for Option 2 is that most units transfer quarterly, and if a unit transfers to the home base and leaves all demands at the contingency -- will the home base have the demands necessary to receive adequate levels from RBL? The returning planes accrued zero demands at the home base, but they are relying on RBL to allocate the parts to continue flying – at their home base.

We conducted an analysis to answer that question. We used data from two different bases and weapon systems (Pope/A-10 and Shaw/F-16) and the RBL model to compute levels. We used the demand data for a full base (all planes present) for a quarter, then projected percentages of the aircraft missing for several quarters, decremented the demands for those quarters, and re-ran RBL. Since RBL uses the SBSS reported base demands over five quarters, one quarter's demand data may not significantly reduce RBL allocations.

Analysis results - Our analysis shows the reduction in the RBL allocation to the home bases was insignificant (see Appendix B). Basically, missing 90 days demand data did not significantly reduce RBL allocations at the two bases we modeled. However, the AFSWPG wanted to transfer the demand data.

Option summary - Summarizing the options, Option 1 keeps demand data with the unit. It conceptually provides the most accurate levels allocation, and both ACC and USAFE prefer this method. It is more complicated than Option 2. Option 2 is simple, accurate for requirements, and satisfactory for levels allocation.

Supply War Policy Group Data Collection and Reporting System Requirements

The Air Force Supply War Policy Group (AFSWPG) preferred Option 1 with slight modifications. The workgroup requirements were as follows:

1. If the item *is not* currently used at the host (contingency) site, use maximum level zero and recurring demands (unless it is a true non-recurring demand). Support will be provided from the RSP and/or the CHPMSK.

2. If the item *is* currently used at the host (contingency) site, do not use a maximum level of zero. Change RBL to allocate levels to the host site via reported demands (separate and additive to the CHPMSK).
3. Use the ACC L73 to collect each unit's demand data upon return of the transferred unit. The L73 program will collect data using the unique organization code (or SRD) for the contingency unit.
4. Transfer the demand data when the unit returns to the home base.
5. Recompute CHPMSK with new demand data annually.
6. Delete the transferred unit's demand data from the contingency base upon return of the unit to the home base.
7. Modify RBL to honor CHPMSK *plus* any base demand (except maximum level zero). Currently, the CHPMSK levels are subtracted from the base levels, so levels are not allocated above the CHPMSK unless there has been sufficient demand to earn the higher levels.
8. The AF Requirements Team develop a program to identify data that is not properly transferred upon completion of a contingency.
9. Bases take action to ensure contingency demands that do not reflect peacetime demand rates do not generate erroneous requirements and RBL levels (we discuss this more below).
10. AFLMA is to write the procedures for contingency demand data transfers to be included in AFMAN 23-110, Vol 2, Part 2, Chapter 26 (see Appendix A). Prior to formal publication in AFMAN 23-110, these procedures will be distributed to the MAJCOMs as draft procedures.

Reviewing and Filtering Wartime Demand for Peacetime

In this section, we amplify the requirements (8 and 9 above) to review and filter contingency demands for peacetime use. The objective is to ensure the demand data collected and used for peacetime requirements and levels allocation reflects peacetime demand rates. If an item's failures in the contingency (i.e., wartime setting) do not reflect normal peacetime flying (e.g., electronic countermeasures, gun parts), then those failures should not be used to compute peacetime requirements or levels. In addition, once all contingency units return to their home base, the Air Force should ensure all demand data for units that transferred home is purged from the host (contingency) site. For example, no F-15 data should remain at a host site that has no F-15s assigned.

Segregating Wartime Demand Data - We suggest the Air Force identify wartime from peacetime demands and separately accumulate both types of demand. This would be the best source of peacetime levels calculations and wartime requirements forecasting.

One method of segregating peace from war demand data would require changes to the current SBSS. Specific wartime demands would have a unique demand code, to be used for *specific wartime demands*. The special demand code would be used for applicable wartime demands for the host base as well as the contingency unit. The purpose of the demand code is to identify demands that shouldn't count for peacetime levels (for example, electronic warfare components, gun barrel replacement, etc.). The SBSS will store the demands separately (i.e., on parallel item,

repair cycle and SRD consumption records). These demands will not be used for computing peacetime demand levels (i.e., not reported on the XCBs). The SBSS will report these demands to D041 using the wartime demand code; these failures will be recorded at AFMC via the 7WS and/or the DAC), but not used for peacetime demand computations. All supply records that store demand data would have separate wartime and peacetime accumulators. The item, repair cycle and SRD consumption records would then have all the data necessary for POS levels and wartime requirements computation.

All wartime contingency data for units that transfer should retain their contingency data for forecasting wartime failures. When contingency units transfer their data back to the home base, the data will be stored in the separate, parallel SRD consumption records. Note the data will be transferred to the home base item and repair cycle record like today (except those demands using the wartime demand code). The segregated SRD consumption record data will be used to review/recompute Contingency High Priority Mission Support Kit (CHPMSK) and to provide a basis to forecast RSP failure rates.

Deleting data at the end of the contingency - A lesson learned from the transfer of Kosovo data was that not all contingency failure data was deleted for the contingency supply account. A USAFE base continued to report demand (and received RBL levels) for a weapon system that was not present at that site. We propose the AF Requirements Team and the owning SRAN's MAJCOM, upon completion of the contingency, ensure all demand data and/or levels for any RBL NSNs on weapon systems not assigned to that base are identified. MAJCOMs should review and take proper action before RBL is run. The AF Requirements Team should also develop a program/procedure to review and delete non-applicable demand and levels data for the NSNs that were in the CHPMSK.

Contingency failure data reporting

Today, all contingency failure data is reported to D041 via DAC transactions. We propose that all contingency demand data be recorded at the contingency site, transferred to the home station (when the aircraft return to the home base) and reported via the 7WS to D041 (from either the base where the aircraft reside). The home base should record all failure data on the item, repair cycle and SRD consumption records. However, maintenance and supply managers at the home base must identify any contingency demands not applicable to home base peacetime flying (due to opstempo, climatic conditions or wartime unique failures) and use maximum levels and/or the special wartime demand code to constrain the peacetime level. This also means the AFMC material manager (MM) and equipment specialist (ES) must modify failure rates for D041 peacetime requirements computation. AFMC should record demands with the special wartime code and not include those failures in peacetime requirements computations. We prefer to report all demand data. We think it is important to record and rehome the actual demand data and then exclude demands with the special demand code and/or manually adjust the demand for requirements and levels allocation.

Demand data transfer timing

Care should be taken if the unit returns to the home base at the end of a quarter (March, June, September and December) because the end-of-quarter failure data (7WS) must be reported from one and only one site – either the contingency site or the home base. For example, do not run the ACC L73 at the contingency site after the quarterly option of the D28 has been processed there and then turn around and run the ACC L73 at the home base before the quarterly option of the D28 is run there. This would result in duplicate reporting. Also, do not eliminate the data at the contingency site *before* running the quarterly option of the D28 and then load the data at the home base *after* running the quarterly option of D28. This would result in no reporting.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

1. There is no standard procedure for recording, reporting, and transferring contingency demand data.
2. There is no standard program to collect transferred unit data and update home base records. The ACCL73 currently collects demand data to transfer.
3. There is no supply TRIC to accurately update the SRD consumption records.
4. There is no method to separate peacetime and wartime demands.
5. The Air Force Wartime Supply Policy Group approved transferring demand data when the weapon system returns to their home base.
6. The base closure flag suits the need better than maximum levels of zero for suppressing contingency levels.

RECOMMENDATIONS

1. Approve and post our proposed procedures (Appendix A) for AFMAN 23-110, Volume 2, Part 2, Chapter 26, Section O, Contingency Demand Data Recording, Reporting, and Transferring (Appendix A). The proposed procedures are based upon the AFWSPG recommendations and the ACC L73 program. (OPR: USAF/ILSP)
2. As an interim, post the ACC L73 SURGE program on a web site along with the documentation to process the program (OPR: ACC/RSSM) and mandate its use (OPR: USAF/ILSP).
3. Enhance the L73 to (a) produce dynamic files based upon the input parameters and (b) produce the FCL/FRR files to subtract the transferred demands from the contingency site records (Appendix C). (OPR: ACC/RSSM)
4. Using the ACC L73 as a guide, develop a permanent SBSS program(s) to perform the same functions with our proposed enhancements. (OPR: USAF/ILSP OCR: SSG/ILS)
5. Develop a supply TRIC to add/delete/update the SRD consumption records. (OPR: USAF/ILSP OCR: SSG/ILS)
6. Modify RBL to allocate base levels separately from CHPMSK levels. (OPR: AFMC/LGI and AFLMA/LGS)
7. Upon completion of the contingency, MAJCOMs should use the RBL Central Leveling Summary (CLS) to identify and delete any levels or demand changes for any RBL NSNs at the contingency base for weapon systems that are no longer assigned to that base. (OPR: ACC, USAFE, and PACAF)

8. Upon elimination of a CHPMSK at a location that no longer supports the weapon system, use the RBL CLS to ensure all demand and levels data is purged from the SBSS and CLS files. (OPR: Air Force Requirements Team AFLMA/LGS and AFMC/LGI)
9. Implement a system to ensure 7WS transactions are received from all bases. (OPR: AFMC/LGI OCR: SSG/ILS)
10. Develop procedures for identifying and separately recording wartime from peacetime demands. (OPR: USAF/ILSP)
11. Modify the SBSS to identify a stock number with a base closure flag to RBL via the XCB transaction. (OPR: USAF/ILSP OCR:SSG/ILS)
12. Modify RBL to accept the base closure flag and treat it as a maximum level of zero. (OPR: USAF/ILSP OCR: AFMC/LGI)
13 Modify the logic for manual stock number deletion during FID processing to include deleting item records with a maximum level of zero detail (type detail "E"). (OPR: USAF/ILSP OCR: SSG/ILS)

DISTRIBUTION: Refer to attached Standard Form 298.

APPENDIX A

Proposed Procedures for AFMAN 23-110, Vol 2, Part 2, Chapter 26

Section 26O – RECORDING, REPORTING, AND TRANSFERRING DEMAND DATA AT A CONTINGENCY SUPPORT BASE

26.103. Overview.

26.103.1. Section Summary. This section describes programs and procedures to ensure that demands experienced in a contingency environment are properly recorded in the SBSS (on item, repair cycle, and SRD consumption records); reported to D041 (Recoverable Consumption Item Requirements System) and D035E (RBL); transferred back to home base when the unit re-deploys so they will be available to support future levels and RSP computations; and used for CHPMSK review and/or annual validation. These procedures apply in all instances where an Air Force unit chooses to transfer (versus deploy) readiness spares packages.

26.103.2. Policy. It is imperative that units record, report, and transfer demand data correctly because this data drives the AF's buy/repair programs and is used to allocate readiness based levels.

26.103.2.1. Recording. Proper recording of demands ensures that usage data will be available to compute more accurate levels (both peacetime and wartime). Unless otherwise specified, all demands experienced in a contingency environment will be processed as recurring (demand code R). Each unit that transfers into a contingency environment will also be assigned a unique organization code that will be used when ordering. It is also imperative that the correct SRD be used on all orders. The combination of the unique organization code, proper SRD, and demand code R will facilitate the reporting and transferring processes.

26.103.2.2. Reporting. Reporting demands actually encompasses reporting reparable generations (failures) to the D041 for wholesale requirements computation and usage data to D035E for readiness based leveling. Reparable generations are reported to the D041 on a daily basis as they occur via DAC transactions generated through the daily RAMPS (D28) report. A summary of all reparable generations is also reported to D041 quarterly via 7WS transactions generated through the quarterly option of the RAMPS (D28) report. Normally, reparable generations will be reported from the contingency site because the D041 does not care where failures occur. However, when demand data is transferred, care must be taken to ensure that reparable generations are not reported from both the home base and the contingency site. Usage data is reported to the D035E quarterly via XCB transactions. This data is used to compute readiness based levels, which are not normally desired to support the deployed unit at the contingency site. Therefore, the base closure flag (for all items) and maximum levels of zero (for RBL items) will be used to suppress POS levels (both RCDLs and RBLs) on all items that

are not normally used at contingency sites, i.e., on item records loaded to support units deploying into the contingency site. The base closure flag will prevent stockage of the items, but allow demand data to accrue. The maximum levels will ensure that RBL does not allocate a level for the contingency site despite any usage data that is reported. Maximum levels should not be used if the host unit at the contingency site uses the item because RBL will still allocate levels to support the host site's needs. If CHPMSK levels are used to support the contingency unit, then the CHPMSK levels plus the RBL level will support both the host unit and the deployed unit's needs. While it is highly desirable to have the usage data reported from the home base (for use in future levels), it is not absolutely imperative that the contingency usage data be reported from the home base in the quarter that it occurred. An AFLMA study proved that the DDR's sensitivity to the change in usage during the transfer period is negligible.

26.103.2.3. Transferring. Transferring demand data back to home base after a unit re-deploys will ensure that the data is used to compute more accurate POS levels (RBLs) and also that consumption data will be available for accurate RSP computations. Transferring demand data includes the process of identifying relevant demands that occurred at the contingency site and then moving them back to the home bases records. It also includes deleting the demands from the contingency site and sending a copy of the data to the contingency host MAJCOM. In order to ensure this is done properly, contingency processing must include the use of a unique organization code, the correct SRD, and a recurring demand code. When the contingency unit is returning home, an ACC developed SURGE (ACC L73) program will be used to gather all contingency demand data from the Consolidated Transaction History (CTH) area for transfer and upload at the home base. NOTE: ACC L73 will be used until a standard program is developed and released by the Standard Systems Group. NOTE: However, for long-term contingencies MAJCOMs may choose to retain demand data at the contingency site instead of deleting the data as the unit returns to it's home base. If this option is chosen, the contingency site *must* have maximum levels of zero loaded to prevent RBL from pushing duplicate levels. The L73 must be used to create a copy of the demand data to upload to the home base (using the same data files as the data transfer). In this case the data is not being transferred, but copied to the home base. Demand data upload to the home base must be closely monitored to insure the data is not reported or transferred twice. During long-term contingencies, the data *must* be loaded to the home base *after* end-of-quarter processing has occurred at both the contingency site and the home base. This ensures the failure data (7WS) is only reported to D041 once. If possible, the data should be loaded at the home base within the first 10 days of the new quarter for proper RBL allocation.

26.104. Responsibilities

26.104.1. Major Command Managers (of both Gaining and Deploying Units). Facilitate the transfer of units/RSPs and ensure demand data is: (a) successfully transferred back to deploying unit's home base, (b) maintained at the MAJCOM (a copy of the demand data transferred), (c) deleted from the contingency site, and (d) reported to wholesale systems correctly. MAJCOM managers must furnish contingency demand data files to the Air Force Logistics Management Agency (AFLMA) Requirements Team for annual CHPMSK validations.

26.104.2. Base Contingency Processing Manager at Home Base.

26.104.2.1. Coordinate with Major Command Manager

26.104.2.2. Ensure RSP transfer procedures are followed.

26.104.2.3. Establish and maintain a contingency demand data transfer file that contains all correspondence related to the transfer, including copies of the input and output from processing ACC L73 program.

26.104.2.4. Coordinate with gaining CSB to ensure demand data is identified for transfer back to home base (ACC L73 is processed) when units re-deploy.

26.104.2.5. Coordinate with Maintenance personnel to review demand data to identify items that were used during the contingency that will not be used as extensively to support peacetime operations (e.g., electronic warfare items, gun parts, etc.). Filter out, change, or suppress (using Maximum levels) the demand data for these items. The use of maximum levels is recommended because this ensures the demand data remains available to support other processes. For example, if an EW item was used extensively during the contingency, but only periodically during peacetime, the demand data could still be transferred and a maximum level of 1 could be loaded to limit stockage. Regardless of the method chosen, the data used to update the SRD consumption records should be unfiltered.

26.104.2.6. Monitor the processing of files produced by ACC L73.

26.104.3. Senior Deploying Supply Person.

26.104.3.1. Maintain accountability of RSP as defined in transfer procedures.

26.104.3.2. Ensure all demands at the contingency site are processed correctly (using demand code R, the appropriate Organization code, and the correct SRD).

26.105. Processing Contingency Demand Data. Specific tasks and/or duties are required in three phases – prior to the unit's arrival at the contingency location, during the unit's operation at the forward location, and after the unit returns to the home base. These procedures augment RSPs transfer procedures in Chapter 26, Section C.

26.105.1. Prior to the deployed unit's arrival at the contingency site.

26.105.1.1. CSB supporting the contingency site must load a unique organization record for the arriving unit and furnish the organization code to the home base RPS for processing of program NGV471 (Chapter 6, Attachment A-14).

26.105.1.2. Home base must ensure all files have been created for the RSP being transferred using program NGV471 (Chapter 6, Attachment A-14) and forward the files to the gaining CSB.

26.105.1.3. CSB supporting the contingency site must load all incoming files from the home base under the organization code designated for the inbound unit (program NGV466, Chapter 6, Attachment A-11).

26.105.1.4. CSB supporting the contingency site must load the base closure flag to all item records the home base doesn't normally use, e.g., to new item records loaded for the inbound unit (1F3, Chapter 19, Attachment B-1) and load maximum levels of zero to all XD2 item records.

26.105.2. During the contingency processing at contingency site.

26.105.2.1. Transferred unit must process all issues and backorders using the appropriate organization code, SRD, and demand code. Demand code R (recurring) should be used for all demands unless they were not generated by a failure (mishap, tech order change, etc.).

26.105.2.2. CSB at contingency site must ensure the D28 RAMPS report images are transmitted successfully at each end-of-day (EOD). At the end-of-quarter (EOQ) the D28 should include 7WS images.

26.105.3. Transferred unit returns to home base.

26.105.3.1. CSB supporting the contingency site must ensure all files have been created for the returning RSP using program NGV471 (chap 6A-14) and forward the files to the home base computer operations section for processing.

26.105.3.2. CSB supporting the contingency site must identify and collect the demand and repair (item and repair cycle) data associated with the returning unit. ACC L73 will be used to collect the data from the CTH record. This data will be used to update (add demands) to the home bases records and to eliminate (subtract demands) from the contingency site item and repair cycle records. NOTE: Care should be taken if the unit returns to the home base at the end of a quarter (March, June, September and December) because the end-of-quarter failure data (7WS) must be reported from one and only one site – either the contingency site or the home base. For example, do not run the ACC L73 at the contingency site after the quarterly option of the D28 has been processed there and then turn around and run the ACC L73 at the home base before the quarterly option of the D28 is run there. This would result in duplicate reporting. Also, do not eliminate the data at the contingency site *before* running the quarterly option of the D28 and then load the data at the home base *after* running the quarterly option of D28. This would result in no reporting.

26.105.3.2.1. The ACC L73 program is available from the ACCRSS website (http://www.accrss.langley.af.mil/reports/L73/). Download both the L73CONTINGENCY.TXT (program file) and L73-PARA.TXT (example parameter) files from the web site. The following information (parameters) are needed to process the L73 and get the proper records from the contingency SBSS:

- Date the unit arrived at the contingency site (yyyyddd, four-digit year with the three-digit Julian date, ex. 2000091)

- Date the unit left the contingency site (ex. 2000181)
- SRD used while at the contingency site (ex. AAC)
- Contingency site system designator (ex., A1)
- Host base system designator (ex., 01)
- Contingency site organization code (ex., 674).
- Qualifier/filename of program file for multiple runs (ex., 1GV0*L73-TRANS.)

Catalog a file on the system named 1GV0*L73-PARA in which to place the parameters (mentioned above) for the L73. Also catalog the program file specified in the parameters if processing multiple runs of the L73.

NOTE: For multiple SRDs or organizations, the program file must be specified in the file 1GV0*L73-PARA (see example above). The element names for each run of the L73 will be FCL/<SRD>-<ORG> and FRR/<SRD>-<ORG> where SRD equals the SRD in the parameter and ORG equals the organization code in the parameter (ex., 1GV0*L73-TRANS.FCL/ABA-300 and 1GV0*L73-TRANS.FRR/ABA-300). CAUTION: The program file option must be used with multiple runs of the L73 (via the input parameters) or the data will be deleted and rewritten during each run of the L73.

26.105.3.2.2. After processing the L73, contact the home base computer operations section to get passwords for file transfers. Transfer the following files for single unit processing to the home base: 1GV0*L73-FCL and 1GV0*L73-FRR. Transfer the program file (specified in the input parameter) for multiple unit processing to the home base.

26.105.3.3. CSB supporting the contingency site must process the FCLs and FRRs produced by the L73 to subtract the demands being transferred from the records at the contingency site. The file 1GV0*L73-FCL1S has the action taken code of "S" to subtract the appropriate demands from the CSB. NOTE: The L73 has a pending change to provide the file 1GV0*L73-FRR1S with action taken code of "S" to subtract the appropriate repair cycle data from the CSB.

26.105.3.4. The home base will receive the data file or program file from the contingency site to update the home base's item and repair cycle records. The files will also be used to update the home base SRD consumption records and build transactions to force RAMPS reporting. Once processed, the home base's demand data will appear like the weapon system never left the home base.

26.105.3.4.1. If a single run of the L73 was processed at the contingency site, process the FRR and FCL files transferred from the contingency site (1GV0*L73-FRR and 1GV0*L73-FCL) through the pseudo. If a multiple run of the L73 was processed, each FRR element and each FCL element must be processed through the pseudo (ex., 1GV0*L73-TRANS.FRR/ABA-300 and 1GV0*L73-TRANS.FCL/ABA-300). Correct any rejects before processing other files.

26.105.3.4.2. Retrieve the home base ACC L73 (L73HOMEBASE.TXT) from the ACCRSS website (http://www.accrss.langley.af.mil/reports/L73/). Before processing the program, change

the SRD in the program to match the SRD in the FCL images previously processed through the pseudo. NOTE: For multiple runs, the program will have to be processed once for each SRD.

26.105.3.4.3. After changing the SRD, process the HOMEBASE L73 program. The program will use the FCLs in file 1GV0*L73-FCL to create two files for processing: 1GV0*L73-XCD and 1GV0*L73-QLP. NOTE: If multiple runs of the L73 were accomplished at the contingency site, you must copy each FCL element into 1GV0*L73-FCL and process the HOMEBASE L73 once for each SRD (FCL element).

26.105.3.4.4. Next, you should run the END card and take a file dump of the primary database prior to processing the QLP file. Then you must process the QLP file. This will require access to QLP with UPDATE using the correct INVOKE statement for the primary database. Remember that this is a file alteration and a fix document must be prepared. If any problems occur, you must reload the dump taken prior to the UPDATE before trying it again.

NOTE: If there are multiple organizations/SRDs the program will have to be processed against the applicable FCL file for the organization or SRD. If additional runs of this program are required – save off the 1GV0*L73-XCD and 1GV0*L73-QLP files after each good EOJ of the home base portion of the L73.

26.105.3.4.5. The final step is to process the XCD file through the pseudo and correct any rejects.

26.105.3.4.6. Repeat these steps as necessary for each set of organization/SRD files.

26.105.3.5. All incoming RSP files from the contingency site must be loaded under the proper organization code (used prior to the deployment) by program NGV466 (chapter 6, Attachment A-11).

APPENDIX B

Comparing Home Base RBL Levels Without Contingency Demand Data

We are interested in the potential effect on levels with the loss of demand data at home base for aircraft temporarily transferred to another location. One option is to leave the demand data at the contingency site when the aircraft return to the home base since the contingency site may need that data for its (POS) levels. Leaving the demands at the contingency site will bias home base demands to be smaller than they should be, since it will not include the demand that occurred at the contingency site. Note the SBSS uses up to 540 days of demand history, so leaving 90 days of demand data at the contingency site may not have a significant impact on home base levels. Of course this assumes aircraft return after 90 days.

We modeled the change in the base RBL levels and Expected Back-Orders (EBO) when the aircraft returned but didn't backfill data that occurred at the contingency site for the quarter they were transferred. Specifically, we modeled the cases below using January 1999 RBL data. We checked with ACC to ensure that no aircraft were transferred in the quarter before January 1999 (Oct 98 – Dec 98). So for the baseline we used the January 1999 RBL demand rate. We then decreased the daily demand rate (DDR) by 1 quarter's demand (simulating a 90-day transfer of the aircraft).

- At Pope, which had 28 A-10's, we modeled 4 (1/7) and 14 (1/2) of the aircraft transferring for a quarter and returning
- At Shaw, which had 72 F-16's, we modeled 24 (1/3) and 48 (2/3) of the aircraft transferring for a quarter and returning

We set up RBL to use the daily demand rate for five previous quarters of demand data as if the first four had all aircraft present and the last quarter had only the reduced number (those not transferred). We compared the base RBL levels and EBOs results for each base to the case where all the aircraft (and their demands) were present for all five quarters. To estimate EBOs, we used the RBL levels results for the previous (transferred) quarter, but factored the demands back up to that for all aircraft being present for all five quarters. We compared these results to the case where all the aircraft were present all five quarters. The results from our modeling are presented in table B-1.

Pope (FB4488 - 28 A-10's, 279 NSNs)

- 4 A/C deploy and return, no data backfill
- Change in Pope EBO (all NSNs) = +1.99 (+1.84 in one NSN)

Delta RBL	Qty	% of all
-2	1	0.4%
-1	5	1.8% (2 of 5 NSNs reduced to 0)
0	273	97.8%

- 14 A/C deploy and return, no data backfill
- Change in Pope EBO (all NSNs) = +7.21 (+6.55 in one NSN)

Delta RBL	Qty	% of all
-7	1	0.4%
-1	17	6.1% (7 of 17 NSNs reduced to 0)
0	261	93.5%

Shaw (FB4803 - 72 F-16's, 392 NSNs)

- 24 A/C deploy and return, no data backfill
- Change in Shaw EBO (all NSNs) = +0.94

Delta RBL	Qty	% of all
-1	17	4.3% (4 of 17 NSNs reduced to 0)
0	375	95.7%

- 48 A/C deploy and return, no data backfill
- Change in Shaw EBO (all NSNs) = +2.09

Delta RBL	Qty	% of all
-1	32	8.2% (9 of 32 NSNs reduced to 0)
0	360	91.8%

Table B-1, Demand Data Modeling Results

Note delta RBL is the RBL level for the reduced case minus that for the full case, so a negative (-) value means a reduced RBL. For Pope, with 4 aircraft, 1 item's level reduced by 2 and 5 items reduced by 1 (for which 2 of the 5 levels were reduced from 1 to 0). Pope would experience 1.99 more expected backorders from not updating the demand data.

Overall for both bases, not updating the demand data affected only 2 to 8 percent of the levels. For example, for the Pope case with 4 aircraft transferring, 2.2% (0.4% plus 1.8%) of the levels changed. For Shaw, with more aircraft and therefore more demand, the results show the loss of one quarter's demand data also had few base levels affected. We conclude there is relatively little impact from not updating the demand data every quarter. So Option 2, transferring demand data at the end of the contingency or annually, will not have a significant effect on home base levels.

Although we show there is not much impact on the home base levels, the Supply Wartime Group selected the more accurate (but more complicated) method to transfer the demand data back to the home base upon the return of the weapon system.

APPENDIX C

ACCL73 Enhancements

The ACCL73 is the only program currently available to transfer demand data from the contingency site to the home station. Although it does a thorough job, some enhancements would greatly simplify the process.

Currently, the L73 produces the same files each time it is processed. If multiple SRDs or organization codes are to be transferred, great care must be taken to copy the data to safety files before processing the next SRD/organization code. As seen in Figure C-1 below, the same file name is used regardless of the input parameters to the L73. If the input parameters are used for dynamic file allocation it would negate the need for immediate backups (to process multiple SRD/org codes) and the data would be recognizable by the filename. The parameter used in Figure C-1 (SRD=ACK, org code = 123) will generate the same files as a subsequent run of the L73 with a different parameter (SRD of ABA and an org code of 350).

```
L73: SEQUENCE
   OPEN OUTPUT DISK-3 USING '1GV0*L73-DATA' ;
   OPEN OUTPUT DISK-2 USING '1GV0*L73-FCL' ;
   OPEN OUTPUT DISK-1 USING '1GV0*L73-FRR' ;
   ...
19992751999364ACKA501123   (L73 Parameter)
```

Figure C-1, Current L73 Files

Dynamic file allocation would create a file name based upon the input parameters. Figure C-2 displays some SURGE code to dynamically create a file name of "1GV0*L73FCLACK123" for the parameter listed in Figure C-1 above. Using the same example as in the previous paragraph, a subsequent run with an SRD of ABA and an org code of 350 would create the file name "1GV0*L73FCLABA350" -- and it doesn't require a file backup to process multiple SRD/org codes.

```
MOVE '1GV0*L73FCL' & $READ$-RCD[15,17] &
        $READ$-RCD[22,24] TO FCL-INPUTFILE ;
OPEN INPUT DISK-2 USING FCL-INPUTFILE ;
```

Figure C-2, Proposed L73 Files

A final enhancement to help reduce human error would be creating the FCL and FRR files to subtract the demands being transferred to the home base. Instead of copying off the FCL and FRR files and altering the images, the L73 could create the additional files for (SBSS) contingency processing (possible file names could be 1GV0*FCL-<SRD><ORG-CODE> and 1GV0*FRR-<SRD><ORG-CODE>).

These two enhancements, dynamic file naming and creating the files for contingency processing, would reduce human intervention and greatly simplify the process. The files would be easier to identify and reduce the steps necessary for contingency personnel.

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