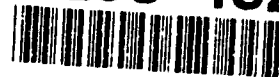


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**ILS ELEMENT E1
MAINTENANCE PLANNING**

**Distribution Program and
User's Manual
Version 1.0**

APJ 966-675

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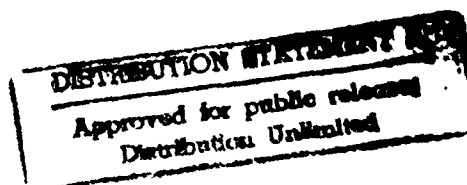


AMERICAN POWER JET CO. RIDGEFIELD N.J.

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This User's Manual is the complete user documentation package, and is provided for guidance in using the American Power Jet (APJ) software. This User's Manual refers to Version 1.0 of the ILS Assessment software. The software permits you to carry out a coherent, orderly and reproducible assessment of Integrated Logistics Support (ILS) Element E1, Maintenance Planning. The software automates the assessment of ILS Element E1 - "Maintenance Planning" and follows the requirements of APJ Report 966-207, "Structured Design - ILS Review Element E1 - Maintenance Planning". It is designed to assess ILS performance as defined in AR 700-127. ILS software guides the user through the assessment by providing a series of questions which may readily be tailored to the weapon system and life cycle stage.					
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**ILS ELEMENT E1
MAINTENANCE PLANNING**

**Distribution Program and
User's Manual
Version 1.0**

under

CONTRACT DAAA21-86-D-0025

for

**HQ US AMCCOM
INTEGRATED LOGISTIC SUPPORT OFFICE
AMSMC-LSP
ROCK ISLAND, IL**

by

AMERICAN POWER JET COMPANY

RIDGEFIELD, NJ

ST. LOUIS, MO

WILLIAMSBURG, VA

ARLINGTON, VA

April 1991

PLEASE READ THIS

This manual is intended to demonstrate the ILS Assessment Software and aid the user in becoming familiar with its operation. The screens illustrated in this manual, are intended as a guide to help the analyst through the software operation and provide a sense of "what it looks like". The following ILS review areas have been made the subject of automation.

- E1 - Maintenance Planning
- E11 - Design Influence
- E12 - Standardization and Interoperability
- E13 - RAM-D
- E14 - Support Management and Analysis
- E15 - Cost Analysis and Funding

Because a single automated procedure with a consistent human interface is the objective of APJ's efforts, the analysis structure, screens and operating procedure are identical for each ILS assessment area.

To avoid cumbersome repetition, we have used E1 Maintenance Planning as illustrative displays for all manuals regardless of subject.

The specific assessment questions for each of the other ILS areas (E1, E11, ... etc.) are set forth in the respective automated screens, reports, and Help. To facilitate review and planning of each assessment task, the Data Flow Diagrams and questions are reproduced in Appendices A and B respectively of the manual corresponding to the given task.

The information contained in this manual is generic, and is weapon system and life cycle phase independent. It is designed to be readily structured for any specific weapon system and life cycle stage, and facilities are provided to tag each pertinent question so that attention may be focused on remunerative issues.

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FOREWORD

This manual supports the automation of the Structured Analysis of Integrated Logistics Support (ILS) functions. It is the complete user documentation package, and is provided solely for guidance in using the APJ software.

The ILS assessment software is a unified and iterative approach to the management of logistic support throughout the life of a Weapon System. It enables the user to review logistic support decisions and, if required, establish corrective actions.

The automated ILS system is being developed by the American Power Jet Co. (APJ), under contract to HQs AMCCOM. A major goal of the project is to unify the military and contractor approach to the performance of ILS. This approach was validated by AMCCOM, and necessary adjustments were made to attain a fully useful and user-friendly program.

APJ has used Structured Analysis and Design to develop the ILS assessment logic in accordance with AR 700-127 "Integrated Logistic Support".

The Structured Analysis and Design for ILS Element E1 (Maintenance Planning) was presented in APJ Reports 966-201 and 966-207. APJ's task performance has been closely coordinated with the Army Logistic Evaluation Agency and AMCCOM. Their assessment experience has been captured in APJ's logic through continued coordination and review at the working level.

The application software functions as an automated assessment technique and data repository that insures the ILS review is complete and yields actionable results. The assessment logic provides a determinate definition of data requirements, detailed implementation processes, and standard output reports. Additionally, a cost, performance, and schedule risk module has been created for each process.

The ILS assessment software is available through HQ AMCCOM, AMSMC-LSP to program managers, ILS functional area representatives, and review activity personnel. It provides guidance and a means of assessing ILS performance by using the automated assessment procedure. Through the use of this procedure, problems may be quickly identified and resolved before testing and milestone reviews.

The Structured Analysis for ILS Element E1, Maintenance Planning contains the following seven (7) major modules:

1. Review of Design Status Assessments for Logistical Impacts.
2. Review of Program Management Documentation for Completeness.
3. Review of Consistency of (Baseline) Maintenance Concept (B)MC.
4. Review of the (P)MAC to (B)MC for Consistency.
5. Review of Maintenance Tasks vs Resources for Consistency.
6. Review of Sub-Plans for Executing Maintenance Planning.
7. Assess Maintenance Plan.

NOTE

A bar in the left hand margin of any paragraph indicates changes from the Beta Test version of this manual.

This work was performed by a task team for APJ: George Chernowitz, James M. Ciccotti, Scott Lerman, and William Villon. The manual was prepared by Arthur Kreitman; editing and typing support were most competently provided by Barbara Boren and Denise Montanez.

| We gratefully acknowledge the significant contributions made to the quality of this product by Messrs. T. Merritt of LEA and M. Finkel of AMSAA, H.M. Orrell and A. Mraz of Optec, and to the reviewers of this work at DCSLOG and Deputy, ASA for Logistics, Department of Army: Major General James W. Ball, William P. Neal, Lawrence Hill of DCSLOG and Mr. A Campo, Assistant Deputy for Logistics, ASA Logistics. The support of Messrs. Ned A. Shepherd and Ron Duclos of AMCCOM, AMSMC-LSS is gratefully acknowledged for their assistance in many regards.

All comments on this version are welcome and should be addressed to:

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CHAPTER 1

INTRODUCTION

1.1 GENERAL.

USER'S GUIDE

1.1.1 This User's Manual accompanies Version 1.0 of the ILS Assessment software. The software permits you to carry out a coherent, orderly and reproducible assessment of ILS Element E-1, Maintenance Planning. It is part of an APJ originated structure for addressing all of the ILS areas in AR 700-127.

1.1.2 This is designed to serve activities concerned with assessing ILS performance as defined in AR 700-127 and establishing its cost, schedule, performance and sustainability implications. Provision is made for such assessments at both the overall and detailed levels.

1.1.3 The user is guided through a series of questions which may readily be tailored according to the weapon system characteristics and life cycle stage. The overall set of questions and their organization are provided in Appendices A and B.

1.1.4 An important feature is a fully articulated guide to performing the assessment through a system of help screens, with a hypertext selection menu. This help system may likewise be tailored to the specific weapon system and life cycle stage.

1.2 SCOPE.

COVERS AR 700-127

1.2.1 The Department of the Army has a requirement for management control of contractor and government requirements for implementation of AR 700-127, (Integrated Logistic Support). Headquarters AMCCOM has initiated action to structure the review of each ILS element, as to the form of the results and the detailed processes involved. This action is necessary to ensure consistency with current US Army policies, procedures and techniques.

**REVIEW
SCOPE**

1.2.2 This computer-assisted system will result in uniform development of a logistical database. It addresses all aspects of the ILS assessment elements, as set forth in Department of Army and Department of Defense administrative publications. Furthermore, it will insure uniformity in efforts and products, reproducibility of analyses, and a well defined structure. This system can be coordinated among all participants in the logistic process to arrive at standardized procedures and a common basis for understanding assessment results.

**GENERIC
MANUAL**

1.2.3 This user's manual is baselined on ILS Assessment Element E1, Maintenance Planning. The examples of screens and reports shown in this manual are intended to illustrate the operation of the software independent of the assessment element. The process titles may be different in the various element, but the operation is unchanged.

1.3 ILS REVIEW LOGIC AND ORGANIZATION.

1.3.1 This software automates the assessment of ILS Element E1-"Maintenance Planning" and follows the requirements of APJ Report 966-207, "Structured Design-ILS Review Element E1-Maintenance Planning".

1.3.2 A detailed Structured Analysis of this review element was developed in APJ report 966-204, "ILS Review Element E1". The detailed Data Flow Diagrams (DFDs) from this Structured Analysis are included as Annex A to this manual, and provide the user with an overview of the logic and approach taken with the analysis.

1.4 ILS SOFTWARE ARCHITECTURE

1.4.1 The overall concept of assessment is illustrated in figure 1-1 and is weapon system and life cycle phase independent. ILS software is designed to guide the user through an assessment by providing a series of questions for the analyst to answer. The analyst must select the equipment to be assessed and enter an identification before reaching the main menu. From the main menu the user can either perform an assessment or generate a report using data from previous assessments.

1.4.2 During the process of performing an assessment, the user is guided through a series of processes and/or subprocesses that enable him to select a question to be answered. Once a question is selected, the user selects one of several possible responses. After responding to the question the user enters an assessment of the selected answer.

1.4.3 From the main menu the user can generate a report of the information that has been entered during a current or previous sessions. The output of the generate report can be directed to a printer, screen or stored as a file.

PROGRAM**1.5 SOFTWARE PROVIDED.**

1.5.1 The Structured Design-ILS Review Element E1-Maintenance Planning software is loaded on 360K 5-1/4 inch floppy disks that are provided separately. Refer to Chapter 2 for the equipment required to run this software.

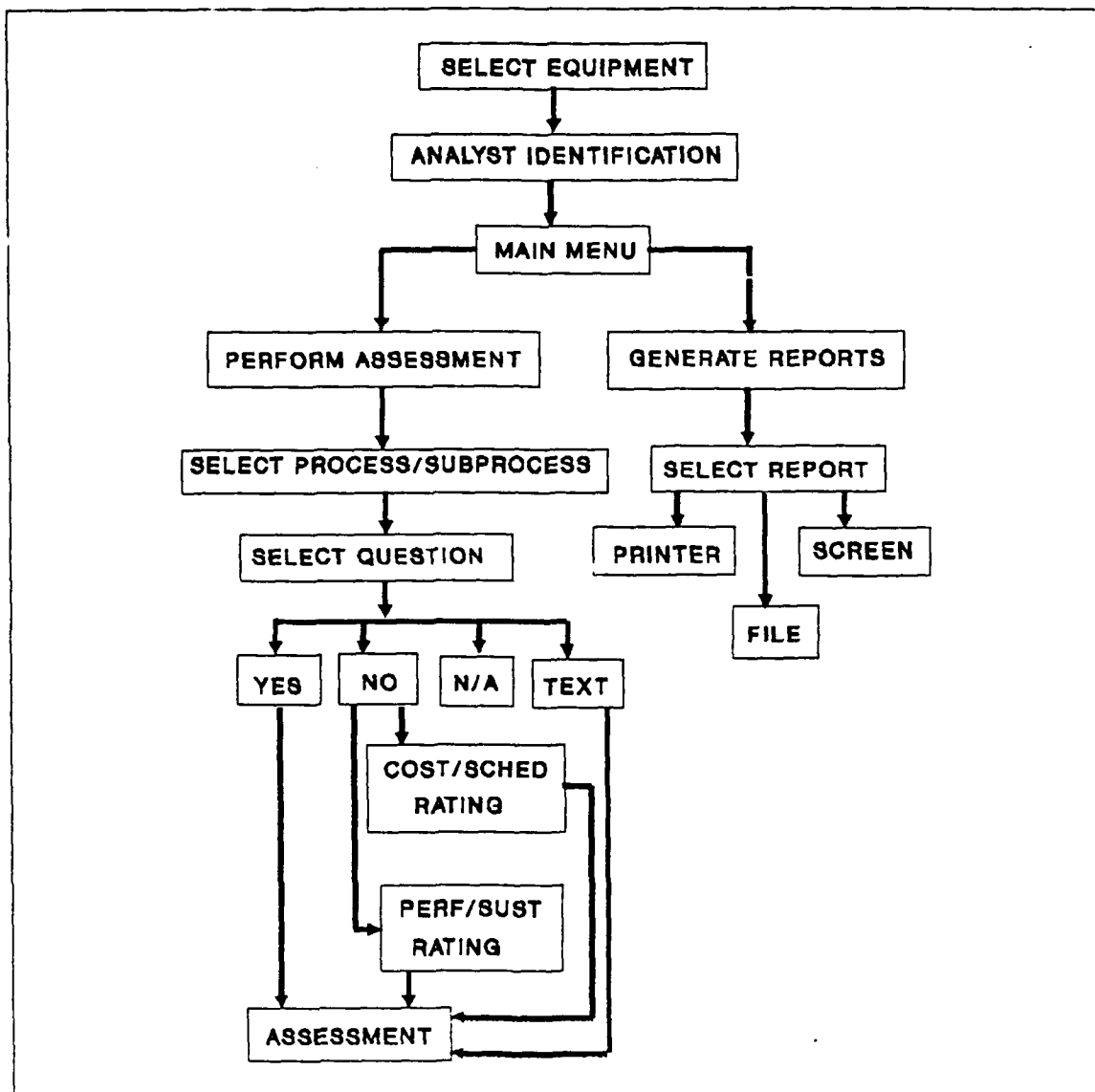


Figure 1-1. ILS Software Architecture

CHAPTER 2

SOFTWARE INSTALLATION AND BACKUP

2.1 GENERAL

2.1.1 This chapter describes the installation of the executable software and the procedures for making a backup file.

2.2 EQUIPMENT REQUIREMENTS

2.2.1 To operate the ILS Review Element E1 software, the user must be equipped with at least the following equipment, or its equivalent.

1. IBM-PC-XT with DOS version 3.3 or later and 640K RAM
2. 360K or 1.2MB Floppy Disk Drive and 20MB Hard drive
3. Printer: The following printers are supported by the software printer drivers

HARDWARE

Epson E/F/J/RX/LQ
HP Laserjet 500/+/II
IBM 80 CPS Matrix

NOTE

If your printer is not one of those listed, select the "IBM 80 CPS Matrix" which allows you to tailor the report generator for any printer.

POWER

2.3 POWER ON/OFF

2.3.1 Since each system is slightly different, follow the manufacturer's specific start-up instructions for the personal computer being used to perform the assessment. Make sure that both the Central Processing Unit (CPU) and the Monitor are powered up. Proceed to the system installation section for the instructions on installation of the Logistics Assessment Software.

2.4 SYSTEM INSTALLATION

**MAKE
DUPLICATE
COPY OF
DISKS**

2.4.1 This section describes the procedure to load the executable software residing on the floppy disk onto the computer's hard disk and instructions for making copies of the executable program and associated data bases for field use.

2.4.2 Before installing the software for the first time, duplicate the supplied disks. Apply write protect tabs to the original disks and store in a safe place. Use the copy of the software for system installation.

**MODIFY
CONFIG.SYS**

2.4.3 In order for the ILS software to operate properly, the CONFIG.SYS file must contain the statements: FILES=50 and BUFFERS=20. Add these statements to the indicated files if they do not already exist.

2.5 INSTALLATION ON A HARD DISK.

HARD DISK

2.5.1 To install the software on a hard disk of the personal computer, perform the following procedures.

1. Turn the computer and monitor on. The computer should boot-up and the hard disk drive prompt (usually C:\) should appear on the screen.
2. Insert the copy of disk 1, ILS Assessment Software, into Drive A.

3. After the C:\ prompt, type "MD C:\ILS" and press <Enter>. This creates an ILS directory on the hard disk and the C:\ prompt will appear.
4. Type "Copy A:*. * C:\ILS" and press <Enter>. This copies all of the files from the Logistic Assessment Software floppy disk into the ILS directory on the hard disk.
5. Upon completion of copying the files into the ILS directory, the C:\ prompt appears. Remove the software disk just copied from Drive A and store in a safe place.
6. Insert the copy of each disk provided into Drive A, and repeat steps 4 and 5.

2.6 INSTRUCTIONS FOR FIELD USE.

WORKING COPY

2.6.1 The following procedures are for copying the ILS assessment software onto a single 1.2MB floppy disk from the computer's hard disk drive. This provides a working copy of the software for use at a field location, or on a laptop computer. Refer to paragraph 2.7 for procedures to copy the ILS assessment software onto 360K floppy disks.

1. Turn the computer and monitor on. The computer should boot-up and the hard disk drive prompt (usually C:\) should appear on the screen.
2. Insert a 1.2 M blank formatted floppy disk into Drive A.
3. After the prompt type "Copy C:\ILS*.EXE A:" and press <Enter>. This copies the executable file from the ILS directory onto the disk in Drive A.
4. After the prompt type "Copy C:\ILS*.DBT A:" and press <Enter>. This copies the files from the ILS directory onto the disk Drive A.
5. After the prompt type "Copy C:\ILS*.DBF A:" and press <Enter>. This copies the files from the ILS directory onto the disk in Drive A.

6. After the prompt type "Copy C:\ILS*.MEM A:" and press <Enter>. This copies the files from the ILS directory onto the disk in Drive A.
7. After the prompt type "Copy C:\ILS*.RTL A:" and press <Enter>. This copies the files from the ILS directory onto the disk in Drive A.
8. After the prompt type "Copy C:\ILS*.TXT A:" and press <Enter>. This copies the files from the ILS directory onto the disk in Drive A.
9. After the prompt type "Copy C:\ILS*.OVL A:" and press <ENTER>. This copies the files from the ILS directory onto the disk in Drive A.
10. Remove the disk from Drive A. Label this disk with file identification and date. This is the working copy that can be used at a field location to perform an assessment.

2.7 MAKING A FIELD COPY

360K FIELD COPY

2.7.1 The following procedures are provided for copying the ILS assessment software onto multiple 360K floppy disks from the computer's hard disk drive.

1. Turn the computer and monitor on. The computer should boot-up and the hard disk drive prompt (usually C:\) should appear on the screen.
2. Insert a 360K blank formatted floppy disk into Drive A.
3. After the prompt type "Copy C:\ILS*.EXE A:" and press <Enter>. This copies the executable file from the ILS directory onto the disk in Drive A.
4. Remove the disk from Drive A and insert a new 360K blank formatted disk into Drive A. Label this disk with file identification and date.
5. Repeat the procedures of steps 2 through 4 using the following commands to copy the files to the disks.

NOTE

More than one disk is required during the process of copying the following files.

- a. After the prompt, type "Copy C:\ILS*.DBT
A:".
- b. After the prompt, type "Copy C:\ILS*.DBF
A:".
- c. After the prompt, type "Copy C:\ILS*.MEM
A:".
- d. After the prompt, type "Copy C:\ILS*.OVL
A:".
- e. After the prompt, type "Copy C:\ILS*.TXT
A:".

2.8 SOFTWARE BOOT-UP PROCEDURE

BOOT-UP FROM HARD DRIVE

2.8.1 The following procedures should be followed each time the software is initiated. Paragraph 2.9 contains procedures for using a hard disk drive, and paragraph 2.10 contains procedures for using a floppy disk.

2.9 BOOT-UP SOFTWARE USING HARD DISK

2.9.1 The following procedure is used for accessing software installed on the computer's hard disk drive.

1. Turn the computer and monitor on. The computer will boot-up and the hard disk drive prompt (usually C:\) will appear on the screen.
2. Type "CD\ILS" and press <Enter> to change to the ILS directory. C:\ILS appears on the screen.
3. Type "ILS" and press <Enter>. The program is now initialized and an introductory screen appears. Refer to Chapter 3 for identification of screens, and Chapter 4 for instructions on performing an assessment.

2.10 BOOT-UP PROGRAM USING FLOPPY DISK.

2.10.1 The following procedure is used for accessing the program from a floppy disk.

BOOT-UP FROM FLOPPY

1. Boot-up the computer with the DOS system disk.
2. Insert program disk into Drive A.
3. At the A drive prompt, type "ILS" and press <enter>. The program is initialized and the ILS screen appears. Refer to Chapter 3 for identification of screens, and Chapter 4 for assessment entering procedures.

2.11 CREATING BACK-UP FILES

2.11.1 At the end of a day, make a back-up copy of the files. The back-up disk may be useful under the following conditions:

- (1) If there is a computer hardware problem and another computer is used.
- (2) Data files are corrupted or become otherwise unusable and restoration of the files is required.
- (3) Transportation of the files from the user site to another management site.

2.11.2 Prior to creating any back-up files that will be restored to another machine, the analyst must ensure that:

PRE- BACKUP INSTRUC- TIONS

1. Formatted disks are available.
2. The machine that the back-up will be restored to has a DOS release version that is equal to or higher than the DOS release version on the back-up machine.
3. The backup and restore .COM files are in a directory specified in the autoexec.bat file path. If not, the complete paths for the back-up and restore must be specified at the time each is processed.

**BACKUP
PROCEDURES**

2.11.3 Perform the following procedures to create a back-up disk:

1. At the end of a session, place a formatted disk in Drive A. <Exit> from the ILS program to return to the C:\ILS DOS prompt.
2. Type "BACKUP A:\ILS" and press <Enter> to create a set of back-up disks.
3. Remove the back-up disks from Drive A, label and date them. No more than two days' worth of files should be maintained on such back-up disks. On the third day, the back-up files made two days ago should be updated and overwritten.

2.12 RECOVERY PROCEDURES

RESTORE

2.12.1 When file restoration is required, place the latest backup disk in drive A and type "RESTORE A:C:\ILS/S" and press <Enter>. The files will be restored.

**RECOVERY
FROM
CORRUPTED
INDEX
FILES**

2.12.2 If one or more index file associated with the data bases becomes corrupted, use the utility program procedures described in paragraph 3.4.3.

NOTE

Re-indexing and packing is recommended at least every 2-3 days.

2.12.3 The following is a list of files comprising the ILS Review/Software.

<i>ILS REVIEW SOFTWARE INSTALLATION AND BACKUP 2-8</i>
--

*FILE
NAMES*

ANALYST.DBF	HELPILS2.TXT	QLIST.DBT
CHOICEN.DBF	ILS.EXE	REPWELC.MEM
CHOICEN.DBT	ILSYS.OVL	RESPONSE.DBF
CHOICET.DBF	ILSYS2.OVL	RR_PR1.MEM
CHOICET.DBT	INSTR.TXT	SESSION.DBF
CHOICEY.DBF	INTRO.TXT	SUBROC.DBF
CHOICEY.DBT	PROCESS.DBF	SUMMARY.DBF
EQUIP.DBF	PROCLOOK.DBF	SUMMARY.DBT
HELPILS.TXT	QLIST.DBF	WELC.MEM

CHAPTER 3

START-UP OPERATIONS

3.1. INTRODUCTION.

BACKGROUND

3.1.1 The U. S. Army ILS Assessment Software is an interactive menu driven system. The software is accessed by completing a series of identification screens prior to accessing the Main Menu. From the Main Menu, you can perform an assessment, generate reports, obtain help, or exit the program. This chapter explains the purpose of each screen and the required response.

3.2 EQUIPMENT IDENTIFICATION SCREEN.

3.2.1 After system initialization, the introductory screen appears. When any key is pressed, the Equipment Identification Screen appears as shown in Figure 3-1.

EQUIPMENT SIGN-ON SCREENS

3.2.2 To sign on to the system either enter the equipment ID (20 alphanumeric characters maximum), or press <Enter> to view a list of previously entered equipments. Use the arrow keys to move the highlight bar to the equipment desired. Select the equipment by pressing <Enter>. The Equipment Sign-On Screen is displayed as shown in Figure 3-2.

ADDING NEW EQUIPMENT

3.2.3 If the equipment desired is not on the list, select [NEW] and press <Enter>. The equipment Sign-On Screen is displayed as shown in Figure 3-2. Complete each field up to the number of characters indicated in Figure 3-2, and press <Enter> to proceed to the next field. After completion of the last field, press <Enter> and the Analyst Identification Screen appears.

ENTER EQUIPMENT END-ITEM I.D.:
<RETURN> FOR EQUIPMENT LIST

SELECT EQUIPMENT

[NEW]
AH-64
GRENADE
HELICOPTER
LASER
LAUNCHER

Figure 3-1 Equipment Identification Screen

**EDIT
OPTION**

3.2.4 If the Equipment Sign-On Screen has been previously completed, an ACCEPT-EDIT command appears on the bottom of the screen. To change an entry use the arrow keys to highlight the EDIT option and press <Enter>. This places the cursor on the top line and enables the user to make corrections. Use the arrow keys to move the cursor to the line requiring correction. After completion of all corrections use the arrow keys to highlight the ACCEPT option of the ACCEPT-EDIT selection. Press <Enter> to proceed to the next screen.

3.3 ANALYST IDENTIFICATION SCREEN

**ANALYST
SCREENS**

3.3.1 After completion of the Equipment Identification Screen, two Analyst Sign-On Screens must be completed. The first screen requires you to enter your analyst ID as shown in Figure 3-3 (4 Alphanumeric characters maximum).

EQUIPMENT IDENTIFICATION.....	<u>20A</u>	
MILITARY NOMENCLATURE.....	<u>20A</u>	INDENTURE LEVEL : <u>1N</u>
COMMON NAME.....	<u>20A</u>	
NEXT HIGHER ASSEMBLY.....	<u>20A</u>	
NEXT HIGHER ASSEMBLY.....	<u>20A</u>	
NEXT HIGHER ASSEMBLY.....	<u>20A</u>	
PROGRAM MILESTONE.....	<u>20A</u>	
DEVELOPMENT PHASE MILESTONE.....	<u>20A</u>	
ACQUISITION MGMT MILESTONE.....	<u>20A</u>	
PROJECT MANAGER LAST NAME.....	<u>15A</u>	FIRST NAME: <u>15A</u>
PROJECT MANAGER OFFICE SYMBOL.....	<u>15A</u>	PHONE #: <u>1(999)-999-9999</u>
PROJECT MANAGER AUTOVON PHONE.....	<u>999-9999</u>	
DISCREPANCY REPORTS TO.....	<u>20A</u>	
MANUFACTURER.....	<u>20A</u>	
NATIONAL STOCK NUMBER.....	<u>20N</u>	

Figure 3-2 Equipment Sign On Screen

NOTE

Underlined entries in the sample screens indicate user input and character limits.
A=Alphanumeric; N=Numeric

3.3.2 Upon entering your Analyst ID, the Analyst Sign-On Screen appears as shown in Figure 3-4. If an analyst has signed on before, the software recalls the stored information, and this screen appears with the information previously entered. For an ID recognized by the program, the Analyst Sign-On Screen appears with a two choice menu (ACCEPT or EDIT). Use the arrow keys to highlight either the ACCEPT or EDIT choice. Press the Enter key to select the desired choice. If the information is correct, choose ACCEPT and the Main Menu is displayed.

ENTER ANALYST ID: 4A

Figure 3-3. Analyst Identification Screen

ANALYST ID.....: 4A
 ANALYST FIRST NAME.....: 15A
 ANALYST LAST NAME.....: 15A
 COMMAND OFFICE SYMBOL.....: 15A
 COMMAND OFFICE PHONE.....: 1(999)-999-9999
 AUTOVON PHONE.....: 999-9999

Figure 3-4. Analyst Sign On Screen

**EDITING
EXISTING
INFORMA-
TION**

3.3.3 If the information is to be changed, select the EDIT option, the cursor moves to the first field where the user can make changes. Use the arrow keys to move the cursor to any of the fields requiring change. Move the cursor to the last field (AUTOVON PHONE) and press <Enter> to store the changes and access the Main Menu.

**ADDING
NEW
ANALYST**

3.3.4 The first time an analyst uses the software, the information on the Analyst Sign-On Screen must be completed. After completion of the last field, an ACCEPT-EDIT command appears on the bottom of the screen. Press <Enter> to accept the information.

3.4 MAIN MENU

3.4.1 The Main Menu is shown in Figure 3-5. It enables the user to select one of the options described below. Using the arrow keys; move the highlight bar to the desired option and press <Enter>. At the completion of any option, the program returns to the Main Menu and allows another selection to be made or the session to be terminated.

OPERATIONS	UTILITIES	INTRODUCTION	INSTRUCTIONS	EXIT
------------	-----------	--------------	--------------	------

Figure 3-5. Main Menu

MAIN MENU OPTIONS

3.4.2 OPERATIONS. Selecting this option displays two choices: PERFORM ASSESSMENT and REPORT GENERATION. The first option allows the analyst to perform an ILS assessment on the equipment that was selected via the Equipment Identification Screen. The second is used to access the Report Generation Module. In this module, the analyst can generate management and technical reports that document the results of the assessment. A further description on performing an assessment is provided in Chapter 4 and report generation is discussed in Chapter 5.

3.4.3 UTILITIES. Two utility programs have been included in this option. The utilities are: REORGANIZE INDEX FILES and PACK DATABASES. These options allow the user to rebuild index files when they become corrupted. Files can become corrupted when the ILS program is ended abnormally. This occurs when the power is shut off without exiting normally (i.e., a power failure, or turning off the computer before exiting ILS). It can also occur when data is written to bad spots on disks (hard or floppy) and then cannot be read again.

3.4.3.1 In order to execute the utility programs, use the arrow keys to place the cursor on the UTILITIES option and press <Enter>. The two options REORGANIZE INDEX FILES and PACK DATABASES will be displayed.

NOTE

Corrupted files can be recognized by the user when bad or incorrect data is displayed. If the user suspects that any files are corrupted, both utility programs should be run to rebuild the indices. Once that is complete, the user may proceed.

**RE-
ORGANIZING
INDEX
FILES**

3.4.3.2 To select REORGANIZE INDEX FILES option, use the down arrow key to highlight REORGANIZE INDEX FILES and press <Enter>. This displays a window on the Main Menu Screen entitled "REINDEXING ALL ILS SYSTEM WORK AREAS". As each database index file is rebuilt, the message within the box "Reindexing: Database (file name.DBF)" and the number of records being reindexed are shown. After all databases have been reindexed, a message line appears below the box stating "ILS System Successfully Reindexed, any <Key> to continue."

**PACKING
DATABASES**

3.4.3.3 To select the PACK DATABASES option, use the down arrow key to highlight the selection and press <Enter>. This displays a window on the Main Menu screen entitled PACKING ALL ILS SYSTEM WORK AREAS. As each database file is packed, the message within the box reads "Packing: Database (filename.DBF)" and the number of records that are being packed. Upon completion of packing each file, a message line below the window appears stating "ILS System Successfully Packed, any <Key> to continue."

3.4.4 INTRODUCTION. This option displays a brief narrative about the computer-aided ILS Assessment System Software.

3.4.5 INSTRUCTIONS. This option displays suggestions on how to use the application software, and what to expect when operating the software. In addition, system navigation terminology is also displayed.

**TERMI-
NATING
THE
SESSION**

3.4.6 EXIT. This option displays a pull down menu with a YES and NO option. If the YES option is selected, a second menu is displayed to verify the choice to exit the session. If OK is selected, the program exits and returns to the DOS prompt C:\ILS. If NO is selected, you are returned to the Main Menu.

3.5 OPERATIONS**PERFORM
ASSESSMENT**

3.5.1 From the Main Menu selection, begin the ILS assessment by selecting the PERFORM ASSESSMENT option under OPERATIONS. This option reveals a list of pertinent topics relating to the ILS Element as shown in Figure 3-6.

NOTE

The titles shown in the illustrative figures are provided to show the format of the screen. The actual titles of the ILS Assessment in use may be different, but the software operation is the same.

**ASSESSMENT
TOPICS**

3.5.2 The Assessment Selection Screen shown in Figure 3-6, indicates the process number and abstract (title) of the assessment topic. This permits the user to choose topics that are pertinent for assessing a Weapon System in its current stage of development. Some topics are further divided into subtopics. Use the arrow keys to move the highlight bar to the desired topic and press <Enter> to select it.

3.5.3 Occasionally, and more often as the equipment assessment progresses, the reviewer will note an asterisk (*) on the left hand side of an assessment topic. The * indicates that a process summary has been entered for that topic. It is recommended that the process summary be updated when the reviewer completes most of the questions for the assessment topic.

[SELECT ASSESSMENT AREA]

PROCESS #:	ABSTRACT:
E1.1 - Review Design Status Assessments for Logistical Impacts	
E1.2 - Review Program Management Documentation for Completeness	
E1.3 - Review Design Status Assessments for Logistical Impacts.	
E1.4 - Review Program Management Documentation for Completeness	

Figure 3-6. Assessment Selection

3.5.4 The user can create, review, or edit a process summary by pressing <F3>. The analyst can enter or revise the process summary on the narrative input screen shown in Figure 3-7. After completion of the summary, press <F10> to save. This saves the summary and allows the analyst to make two ratings that assess the Program Cost & Schedule Impact and Equipment Performance & Sustainability Impact.

[ENTER YOUR PROCESS SUMMARY]

[<F10> TO SAVE, <ESC> TO EXIT]

Figure 3-7. Process Summary Screen

**QUESTION
LIST**

3.5.5 When an assessment topic is selected, either a subprocess list appears as shown in Figure 3-8, or a question list is superimposed on the Assessment Selection Screen. The question list shown in Figure 3-9 displays a list of question numbers.

3.5.6 Displayed to the right of each question is its status; DONE, NOT DONE, or N/A (Not Applicable). The status for DONE or NOT DONE is automatically recorded by the software during any of the previous sessions. If the question was answered during any session, it is labeled DONE. It is labeled NOT DONE if it has never been worked on. A N/A (Not Applicable) is displayed when the analyst, during a previous session, determined that the question was not relevant to the equipment or life cycle phase. Refer to Chapter 4 for procedures on performing the assessment.

[SELECT ASSESSMENT AREA]

SUBPROCESS #:	ABSTRACT:
E1.1A1	- Review Tasks or Functions to Mission Requirements Driven
E1.1A2	- Review Maintenance Principles and Level of Repair
E1.1A3	- Review Personnel/Non-Personnel Resource Requirements
E1.1A4	- Review (B) MC use of B Level Army Maintenance Structure
E1.1A6	- Review Maintenance Task and Level of Repair Trade-Offs

Figure 3-8. Subprocess Menu Selection

NOTE

In some ILS Assessment Elements, another level of subprocesses exists before the question list is displayed. The selection of topics in this sublevel is identical with the subprocess selection.

QUESTION #:	ANSWERED
E1.1-01	NOT DONE
E1.1-02	DONE
E1.1-03	DONE
E1.1-04	N/A
.	
.	
.	
E1.1-17	NOT DONE

Figure 3-9. Question Menu

3.5.7 When the question list is displayed, the <F4> key can be used to review the last answer to the question that is highlighted. The information that is displayed is the narrative text portion of the assessment. Use the up and down arrow keys or <Page Up> and <Page Down> keys to scroll through the text. To return to the question list press <ESC>. Either review the answer to another question or select a question to answer.

3.6 HELP SYSTEM

3.6.1 The Help System is available to the analyst throughout the operation of the software program. When the analyst presses the <F1> key a help screen is displayed giving information on the particular operation being performed. Use the arrow keys to navigate through the help screens. If additional information is required, press the <F1> again. This displays an ILS Help System Index Selection Screen. Use the arrow keys to highlight the desired selection and press <Enter> to review the Help Screen. Press <ESC> to return to the program.

3.7 NAVIGATION.

3.7.1 NAVIGATION MENU. The navigation menu appears at the top of the screen when each question is displayed. It enables the user to answer the question displayed or go to another question. The user accesses the navigation menu by pressing the <ESC> key when the YES/NO/NA choices are displayed beneath the question. The navigation menu becomes activated on the upper portion of the screen as shown in Figure 3-10. This menu gives the user the options defined in Table 3-1.

[NAVIGATION MENU]								
ASSESSMENT	FIRST	LAST	NEXT	PREVIOUS	SEARCH	EDIT	EXIT	

Figure 3-10. Navigation Menu

Table 3-1. Navigation Menu Option Descriptions

**NAVIGATION
KEYS**

SELECTION	FUNCTION
ASSESSMENT	Makes question appearing on the screen active, enabling the analyst to answer it.
FIRST	Displays the first question in the assessment.
LAST	Displays the last question in the assessment.
NEXT	Displays the question after the currently selected question. This option is used to skip a question.
PREVIOUS	Displays the question before the currently selected question. This option is used for answering a question that was skipped or to modify the last answer.
SEARCH	Allows the user to either select a specific question by entering the question number, or searching for a question in another topic. The user selects the topic, a subtopic (if available) and then the specific question desired. This option quickly moves you from one part of the question list to another.
EDIT	Allows the user to edit questions previously answered during this session. The user is returned to the question from which edit was invoked. This option may be used if the analyst wants to review the details of a previously answered question without exiting the software.
EXIT	Allows the user to return to the Main Menu.

CHAPTER 4

ASSESSMENT TECHNIQUES AND PROCEDURES

4.1 INTRODUCTION

4.1.1 This chapter provides the user with the procedures required to perform an ILS assessment. It includes procedures on reviewing previous entries, manipulating of the program and generating assessment results.

4.2 HISTORICAL RESULTS

HISTORICAL RECORDS

4.2.1 The ILS Assessment software is designed to generate a historical record of events over the life cycle of a weapon system. The historical record is developed one session at a time.

CURRENT SESSION

4.2.2 A session begins when an analyst signs on by selecting a weapon system to assess, and ends when he elects to exit. During that current session, all answers to questions are recorded and saved by the software. Changes can be made only to questions answered during a current session. Questions previously answered, may be answered again without affecting data already in the system. Once the analyst exits a current session, no additional changes can be made.

AUDIT TRAIL

4.2.3 As additional sessions are held, the saved records become an audit trail of events that have occurred over the life of the weapon system. This information is used when generating the reports described in Chapter 5.

ILS REVIEW ASSESSMENT TECHNIQUES AND PROCEDURES 4-2

4.3 MULTIPLE ANALYST USAGE

DIFFERENT USERS

4.3.1 The ILS Assessment software can be used by multiple analysts (one at a time) on one computer. These analysts can assess the same or different aspects of selected equipment. Each analyst can assess the same or a different piece of equipment.

TAGGING RESULTS

4.3.2 Each time a new user enters the program, he completes the Analyst Identification and Sign-on Screens as described in Chapter 3. The program stores the information for each user in a separate record. Every question answered by the analyst during an assessment is tagged with the analyst identification, equipment identification, date, and time the session started.

4.4 PERFORMING AN ASSESSMENT

MAIN MENU

4.4.1 The ILS Assessment Program is entered from the Main Menu. Refer to Chapter 3 for procedures on completing the preliminary screens necessary to reach the Main Menu. From the Main Menu, select the PERFORM ASSESSMENT option under OPERATIONS. This brings up the assessment program.

STARTING ASSESSMENT

4.4.2 Upon selecting the PERFORM ASSESSMENT option from the MAIN MENU, a list of assessment topics is displayed. Each topic has a series of questions which must be answered to perform the assessment. Refer to Appendix B for a complete list of these questions. To select an assessment topic, use the arrow keys to move the highlight bar to the topic desired and press <Enter>. For a further discussion of selecting an assessment topic, see Chapter 3, paragraph 3.5.1 PERFORM ASSESSMENT.

ILS REVIEW ASSESSMENT TECHNIQUES AND PROCEDURES 4-3

4.5 ANSWERING QUESTIONS

QUESTION SELECTION

4.5.1 After selecting a topic, and a subtopic (if required), the related question list is superimposed on the Assessment Selection Screen. To answer a question, use the arrow keys to move the highlight bar to the desired question number and press <Enter>.

NOTE

The assessment of an answered question can only be changed if it was answered during the current session.

4.5.2 The Question Screen is displayed. The Navigation Menu (see Figure 3-9) appears at the top of the Question Screen, and becomes active (e.g., the program is in a "wait state" while the user makes a selection). The default selection is ASSESSMENT.

4.5.3 To begin answering a question, use the arrow keys to highlight and select the ASSESSMENT option. There are two types of questions that may appear during an assessment. The first type requires either a YES, NO or N/A answer, while the second type requires an explanation.

QUESTION RESPONSE

4.5.4 After reading the question, you can choose to answer it or activate the Navigation Menu by pressing <ESC>. For YES/NO/NA questions, the responses appear below the question and for explanation questions, a box containing a message is displayed.

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4.5.5 To answer the first type of question, use the arrow keys to highlight YES, NO, or N/A and press <Enter> to select. Refer to figure 4-1 for an example of how a question screen is displayed.

NOTE

During the assessment procedure, the <F2> function key is used to toggle between the question and the assessment screens. After toggling back to the question, a series of subquestions that discuss additional points are displayed beneath the main question. The <F10> function key is used to save the assessment, and the <ESC> key is used to abort the assessment and proceed to the next question.

QUESTION NUMBER:	E1.1-04
QUESTION:	Have the estimated fielded quantities been identified and relayed to the logistician? (Equipment densities have an effect on support methodologies).

Figure 4-1. Sample Question Screen

4.5.6 Questions of the second type require an explanation instead of a YES, NO, or N/A response. The question types are predetermined and cannot be changed by the user.

ILS REVIEW ASSESSMENT TECHNIQUES AND PROCEDURES 4-5

4.6 QUESTIONS WITH "EXPLANATION" ANSWERS

**EXPLANA-
TION
RESPONSE**

4.6.1 When an explanation question is selected, a box with the following instructions is displayed at the bottom of a text question screen shown in Figure 4-2.

"<Enter> to proceed, any <Key> next question, <F3> to mark Not Applicable."

4.6.2 ENTERING AN ASSESSMENT. To proceed with your explanation, press <Enter>. The software displays the assessment screen (see Figure 4-3).

4.6.3 NEXT QUESTION. If you decide not to answer the question at this time, press any <Key> other than <Enter> or <F3>. This question is skipped and the software automatically moves to the next question without recording your answer.

QUESTION NUMBER:E1.1-02

QUESTION: How are system designers, maintenance engineers and other logistical element managers communicating on the design and support planning effort?

POINTS TO CONSIDER: Explain mechanism for exchanging information.

Figure 4-2. Text Question Screen

4.6.4 NOT APPLICABLE. If this question is not applicable to the equipment or life cycle phase press <F3>. The software records your answer and automatically moves to the next question.

ILS REVIEW ASSESSMENT TECHNIQUES AND PROCEDURES 4-6

4.7 QUESTIONS WITH "YES" ANSWERS

**YES
RESPONSE**

4.7.1 If the response is YES, an assessment screen is displayed (Figure 4-3) for you to enter an assessment (e.g., narrative text answering the question). The assessment screen provides you with a word processing capability. On this screen you may type up to 14 pages of information concerning each question. Your assessment may consist of the work planned or accomplished in the project that deals with the main issue of the question, or actions required to comply with the intent of the question. If you would like to see the question while entering the assessment, press <F2>. After typing in the narrative text of your assessment, the results must be saved by pressing the <F10> key.

ENTER YOUR ASSESSMENT

ALERT DATE: / / ACTION DATE: / /

Figure 4-3. Example of the Assessment Screen

**ALERT
ACTION
DATE**

4.7.2 After completing the assessment and pressing <F10>, the ALERT DATE and ACTION DATE fields are activated. The ALERT DATE field allows the analyst to record a follow-up date to check on specific actions which should be occurring to resolve a problem. The software only accepts the Alert Date if it is greater than or equal to the session date.

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4.7.3 The ACTION DATE field permits the analyst to indicate when specific actions must be completed. Action Dates must be greater than or equal to Alert Dates or they will not be accepted by the software. If these dates were completed for the same question during a previous session, the dates appear in the fields provided. To complete or edit the dates, proceed as follows:

- a. Complete these fields using the DD/MM/YYYY format. For a single digit, enter a blank space or zero to the left of the digit. The program accepts only actual dates. If an incorrect date is entered, the computer beeps and returns to the first character in the field.
- b. Once both fields are completed, a verification message is displayed. If the dates are correct, press <Enter>. If not, type "N" and press <Enter>. The cursor then returns to the ALERT DATE field for editing.
- c. There is no requirement to complete these fields. To skip either or both of these fields, press <Enter> once or twice. <Enter> can also be used to accept a field that was previously completed. The verification message is displayed. Press <Enter> to select "Y".

4.8 QUESTIONS WITH "NO" ANSWERS

NO RESPONSE

4.8.1 If the response to the question is NO, a sequence of screens follows. The first is a Cost and Scheduling Impact Screen which is displayed beneath the question as shown in Figure 4-4. This screen gives you the ability to rate the impact on the Weapon System program by selecting CRITICAL, INTERMEDIATE, or ROUTINE.

ILS REVIEW ASSESSMENT TECHNIQUES AND PROCEDURE^c 4-8

SELECT THE RATING FOR THE COST AND SCHEDULE IMPLICATION

CRITICAL

INTERMEDIATE

ROUTINE

Figure 4-4. Cost and Schedule Rating Screen

SELECT OPTIONS

4.8.2 The user must select one of these options which indicates the time frame for resolving issues that may cause a program schedule slip or cost increase. The CRITICAL option indicates immediate resolution; the INTERMEDIATE option indicates resolution within 30 days; and the ROUTINE option indicates resolution within cost and schedule constraints.

MILESTONE ASSESSMENT

4.8.3 After selecting one of the options, the Milestone Assessment Screen is displayed (Figure 4-5). On this screen, briefly explain what part of the schedule has been impacted or identify the significant cost driver. To save this information, press <F10>. Following completion of the Milestone Schedule Assessment Screen, the user is asked to rate the Performance and Sustainability Implications.

PERF. & SUST.

4.8.4 The Performance and Sustainability Rating Screen is shown in Figure 4-6. The rating options are again CRITICAL, INTERMEDIATE, or ROUTINE. After making the appropriate selection, a Milestone Performance Assessment Screen is displayed. The user enters a brief explanation of how system performance and sustainability is impacted by the issues addressed in the question. To save the information, press <F10>.

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QUESTION NUMBER: E1.1-03

QUESTION: Have logistical design parameters been incorporated into design analytical efforts?

-----[MILESTONE SCHEDULE IMPACT:]-----

Figure 4-5. Milestone Assessment Screen

RATE THE PERFORMANCE AND SUSTAINABILITY IMPACT

CRITICAL

INTERMEDIATE

ROUTINE

Figure 4-6. Performance and Sustainability Rating Screen

ASSESSMENT RESULTS

4.8.5 The next screen displayed is the Enter Assessment Results Screen. The user enters the assessments results stating why the question was answered "NO". If appropriate, the user should enter a list of actions that must be accomplished to correct any deficiency along with a schedule. Press <F10> to save the information and activate the ALERT DATE and ACTION DATE fields prior to answering the next question. Complete the ALERT DATE fields as indicated in paragraph 4.7.2.

4.9 QUESTIONS WITH "N/A" ANSWERS

MARKING A QUESTION N/A

4.9.1 The user may determine during the course of the assessment that a question is not applicable. A question is not applicable when it is deemed not relevant to the equipment under analysis or does not pertain to the current life cycle phase. To make a question not applicable, use the arrow keys

ILS REVIEW ASSESSMENT TECHNIQUES AND PROCEDURES 4-10

to highlight the N/A choice and press <Enter> to select it. The software records the response and automatically moves to the next question.

CHANGING THE N/A

4.9.2 If a question was marked not applicable during a previous session (by any analyst assessing the equipment), a message to that effect is displayed, when the question is selected again. If the user determines that the question is now relevant, the N/A response may be changed. Use the <F3> key to return the question to its original state so it can be answered following the procedures described in paragraph 4.5.2

4.10 FUNCTION KEYS

NAVIGATION KEYS

4.10.1 The function keys are used as an aid to the user. If you would like to go to another question, instead of answering the present question, press <ESC>. This displays the navigation menu.

4.10.2 Use the arrow keys to highlight one of the other options of the Navigation Menu. These options are ASSESSMENT, FIRST, LAST, NEXT, PREVIOUS, SEARCH, EDIT, and EXIT. For a description of these selections, refer to Chapter 3, Table 3-1. To return to the Main Menu from the Navigation Menu, the user may press the <ESC> key or highlight and select the EXIT option.

<F10> KEY

4.10.3 <F10> KEY. The <F10> key is available on the Assessment Screen and the two milestone screens. It is used to save the narrative text after the user has finished typing a response.

<ESC> KEY

4.10.4 <ESC> KEY. The <ESC> key has several functions. If you press the <ESC> key prior to selecting a response (i.e. YES/NO/NA) to a question, the Navigation Menu becomes active and the arrow keys can be used to make a selection.

4.10.5 Pressing the <ESC> key from the Navigation Menu, returns you to the Main Menu. If you press <ESC> from the Main Menu, you exit the program.

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4.10.6 Pressing the <ESC> key while filling out the assessment screen aborts the answer and displays the next question. Any narrative that is written is not saved.

HELP KEY

4.10.7 <F1> Key. The <F1> key is the help key. Pressing this key displays information to assist the user on using the software, explaining Menu choices or inputting data for a specific screen, and defining the topics on the Assessment Selection Screen. The help key also displays a help menu. This menu allows the user to get context sensitive help for the listed topics.

4.10.8 WORD PROCESSING FUNCTION KEYS. The keys shown in table 4-1, are used when entering text into the program.

Table 4-1. Word Processing Function Keys

WORD PROCESSING KEYS

KEY	FUNCTION
<Insert>	Used to insert a letter, word or phrase between existing words at the location of the cursor.
<Delete>	Used to delete a single letter located under the cursor.
<Backspace>	Used to backspace and erase the previous letter.
<Caps Lock>	Used to enter all upper case letters.
<Enter>	Used to create a hard return to move the cursor to the next line.
<Tab>	Used to indent text line 5 spaces.

CHAPTER 5

REPORT GENERATION

5.1 INTRODUCTION

5.1.1 This chapter provides the user with the information required to generate reports for the ILS assessment performed. All reports can be output to the screen, printer or file.

5.2 SELECTING A REPORT

REPORT CHOICES

5.2.1 The user enters the report generator program from the OPERATIONS option on the Main Menu. After selecting the OPERATIONS option, the user selects the REPORT GENERATOR option. A Reports Welcome Screen is displayed, followed by the Reports Generator Main Menu. The user must press <Enter> on the Report Generation Screen to reach the Main Menu.

5.2.2 The Main Menu has seven report selections and one exit selection. Reports 1 and 2 are executed directly off this menu, while reports 3 through 7 have several submenu options. To select a report, move the highlight bar to the desired choice and press <Enter>. Either a message indicating the report is processing or a window containing a submenu of reports will be displayed. The report options are shown in Figure 5-1 and described in the following paragraphs.

5.2.3 SYSTEM/EQUIPMENT DATA. This option generates a report containing the system/equipment data for this session to the output device selected.

5.2.4 OVERALL ASSESSMENT RESULTS. This option generates a report containing the overall assessment results for the selected equipment to the output device selected.

SYSTEM/EQUIPMENT DATA
OVERALL ASSESSMENT RESULTS
ASSESSMENT STATUS
ASSESSMENT RESULTS
COST AND SCHEDULE IMPACTS
PERFORMANCE AND SUSTAINABILITY IMPACTS
ALERT AND ACTION SCHEDULE DATES
EXIT TO MAIN ILS MENU

Figure 5-1. Report Generator Main Menu

5.2.5 ASSESSMENT STATUS. This option displays a submenu which allows the user to generate either a WEAPONS SYSTEM CURRENT STATUS REPORT or a CURRENT REVIEW SESSION REPORT. The report is directed to the selected output device.

5.2.6 ASSESSMENT RESULTS. This option displays a submenu which allows the user to select an ASSESSMENT HISTORY REPORT, WEAPONS SYSTEM CURRENT STATUS REPORT or a CURRENT REVIEW SESSION REPORT. The generated report is then directed to the output device selected.

5.2.7 COST AND SCHEDULE IMPACTS. This option displays a submenu which allows the user to select a WEAPONS SYSTEM CURRENT STATUS REPORT, CURRENT REVIEW SESSION REPORT, CRITICALITY ANALYSIS REPORT or a WEAPONS SYSTEM SUMMARY REPORT. The generated report is then directed to the output device selected.

5.2.8 PERFORMANCE AND SUSTAINABILITY IMPACTS. This option displays a submenu which allows the user to select a WEAPONS SYSTEM CURRENT STATUS REPORT, CURRENT REVIEW SESSION REPORT, CRITICALITY ANALYSIS REPORT or a WEAPONS SYSTEM SUMMARY REPORT. The generated report is then directed to the output device selected.

5.2.9 ALERT AND ACTION SCHEDULE DATES. This option displays a submenu which allows the user to select an ALERT DATE ITEMS REPORT or an ACTION DATE ITEMS REPORT. The generated report is then directed to the output device selected.

5.2.10 EXIT TO MAIN ILS MENU. This option terminates the report generator program and returns the user back to the ILS Main Menu.

5.3 CHANGING REPORT DESTINATION

5.3.1 The ILS Assessment software allows the User to output reports to the screen, printer, or file. The mechanism to control the output, device is located on the last line of the Report Menu Screen. Pressing the <F2> key toggles between the three options.

SCREEN OUTPUT

5.3.2 SCREEN OUTPUT. The default device for Report Output is the Screen or Video Display. After the report module loads, the output device is set to screen. After selecting the output device, select any report from the menu and the software generates it. After several minutes the report is displayed to the screen in a format that is analogous to one of the figures presented in Chapter 5. To scroll through the report use the up & down arrow, page up, page down, home, and end keys. Once you have finished reviewing the report, use <ESC> to exit and return to the Report Menu.

PRINTER OUTPUT

5.3.3 PRINTER OUTPUT. Press the <F2> key once to change the output device to printer. Make sure that your printer is on-line. Select the report from the Report Menu. After several minutes your report will begin to print out. Depending on the amount of data in the report, it may take a long period of time for the complete report to print out. At the conclusion of the report, a message indicating the report has finished will be displayed.

**FILE
OUTPUT**

5.3.4 FILE OUTPUT. To change the output device to file, press <F2> twice from the Screen Device option or once from the Printer Device option. When this option is chosen, the file name must be entered. The file name must be eight characters or less. Type the name of the file and press <ENTER>. An .RPT file extension is automatically appended to the name of the file. Choose the Report you wish to generate from the Report Menu and after several minutes a message is displayed indicating the report is complete.

NOTE

Caution should be used when naming reports, since a newly created report file can overwrite an existing report file with the same name.

**REPORT
FILES**

5.3.5 REPORT FILES. The files created from the File Output option are stored in the directory containing the ILS Program. The file is an ASCII text file devoid of any special control characters. The page layout of the information contained in the file is formatted exactly like the printed output. This file maybe imported into a word processor in order to print out only pertinent parts of the report or redirected to a printer at a later date. For instructions on printing a text file from DOS, consult your DOS manual.

**SYSTEM/
EQUIPMENT
DATA
REPORT****5.4 SYSTEM/EQUIPMENT DATA REPORT**

5.4.1 This report provides information on the system/equipment being assessed (the system/equipment selected on the Equipment Sign-On Screen). Information related to the life cycle phase, project manager and reviewer is included. Refer to Figure 5-2 for an example of this report.

5.5 OVERALL ASSESSMENT RESULTS REPORT**OVERALL
ASSESSMENT
RESULTS
REPORT**

5.5.1 This report contains the narrative text, Cost and Schedule (C/S), and the Performance and Sustainability (P/S) ratings input for each review topic. The C/S and P/S ratings are CRITICAL, INTERMEDIATE, and ROUTINE. The report is sorted by process number and contains the last assessment for each topic. The topic title and the date of the last assessment are also included. Refer to Figure 5-3 for an example of this report.

5.6 ASSESSMENT STATUS REPORT**ASSESSMENT
STATUS
REPORT**

5.6.1 This report has two options: WEAPON SYSTEM CURRENT STATUS and CURRENT REVIEW SESSION REPORT.

5.6.2 These reports contain seven columns. The columns are labeled: Question, Answer, Review Date, Reviewer Initials, C/S Rating, P/S Rating and Action Date. For the questions answered YES, N/A, or Text, the C/S and P/S ratings will not appear. The Action Date may or may not be completed. Any question not answered will have blank columns to the right of the question number.

5.6.3 CURRENT WEAPON SYSTEM STATUS. This report is used to determine the assessment status of the selected System/Equipment. It lists all questions and shows which are answered. A summary is included at the end of the report which indicates the number of questions answered YES/NO/NA/TEXT, and NOT ANSWERED. Following this is a Criticality Summary for the C/S and P/S showing the total number of questions rated as Critical, Intermediate, or Routine. Refer to Figure 5-4 for an example of this report.

5.6.4 CURRENT REVIEW SESSION. This report has the same format as the CURRENT WEAPONS SYSTEM STATUS REPORT. However, it contains only those questions answered during the current session. Refer to Figure 5-5 for an example of this report.

**ASSESSMENT
RESULTS
REPORT****5.7 ASSESSMENT RESULTS REPORT**

5.7.1 This report has three options: ASSESSMENT HISTORY REPORT; WEAPON SYSTEM CURRENT STATUS REPORT; and CURRENT REVIEW SESSION REPORT. All versions of this report are generated in question number order, but list only those questions that have been answered. In addition, each topic (e.g., process) begins on a new page.

5.7.2 All reports start with the question number and question. This is followed by any related subquestion (if applicable). The answer (i.e., YES/NO/NA/TEXT), session date, and reviewer's name follow the question. If a YES response was made, the assessment (narrative text) will follow.

5.7.3 If a NO response was entered, the Cost and Schedule Rating and short explanation of the rating will follow. Next, the Performance and Sustainability rating with its short explanation will appear. The last item is the assessment results (narrative text) which may include any actions.

5.7.4 HISTORICAL REPORT. The historical report prints each question and subquestion once. This is followed by all the answers to the question in descending date order (latest to earliest). The answers to a question are separated by a line, and the questions are separated by a gray band. Refer to Figure 5-6 for an example of this report.

5.7.5 CURRENT WEAPON SYSTEM STATUS. This report has the same format as the historical report. However, it contains only one answer to every question. The last answer entered, regardless of the analyst who entered it, is included. Refer to Figure 5-7 for an example of this report.

5.7.6 CURRENT REVIEW SESSION. This report has the same format as the historical report. However, it contains only the answers input by the analyst performing the assessment during the current session. Refer to Figure 5-8 for an example of this report.

**COST AND
SCHEDULE
IMPACTS
REPORT****5.8 COST AND SCHEDULE IMPACTS REPORTS**

5.8.1 This report has four options: Current Weapon System Status; Current Review Session; Criticality Analysis; and Weapon System Summary.

5.8.2 CURRENT WEAPON SYSTEM STATUS REPORT. This report is sorted by rating. All CRITICAL issues are grouped together followed by INTERMEDIATE and ROUTINE issues. Within each rating group, the questions are broken down by topic where the first question for each topic starts on a new page.

5.8.3 This report is formatted so that question number, question, subquestion (if applicable) appear first. This is followed by the Cost and Schedule Impact (short narrative), and a detailed action field. Refer to Figure 5-9 for an example of this report.

5.8.4 CURRENT REVIEW SESSION. This report has the same format as the Current Weapon System Status Report. However, this report contains only the answers input by the analyst during the current session. Refer to Figure 5-10 for an example of this report.

5.8.5 CRITICALITY ANALYSIS REPORT. This report provides a summary of problem areas for the equipment being assessed. The report is grouped by rating (CRITICAL, INTERMEDIATE, or ROUTINE). It contains all questions whose last answer was NO. Within each grouping, the topics are sorted by topic number and within each topic, the questions are sorted by question number. For each question, the alert and action dates are listed. At the conclusion of each group, the total number of questions within each rating group is provided. At the end of the report, the total number of questions (e.g. TOTAL ACTIONS) counted in the report is provided. Refer to Figure 5-11 for an example of this report.

5.8.6 WEAPON SYSTEM SUMMARY REPORT. This report compares, by topic, the number of questions rated CRITICAL, INTERMEDIATE, and ROUTINE to the number answered satisfactorily and also includes those remaining to be answered.

5.8.7 This report contains seven columns labeled: Process #; Title; Critical; Intermediate; Routine; Satisfactory; and To Do. It is sorted by process number and reflects only the last answer to each question. All topics are included, even if no questions were answered. The report is intended to identify those topics where a large number of problems exist, and therefore require additional effort. Refer to Figure 5-12 for an example of this report.

5.9 PERFORMANCE AND SUSTAINABILITY IMPACT REPORTS

PERFORM- ANCE & SUSTAIN- ABILITY

5.9.1 This report has four options: Current Weapon System Status; Current Review Session; Criticality Analysis; and Weapon System Summary.

5.9.2 CURRENT WEAPON SYSTEM STATUS REPORT. This report is sorted by rating. All CRITICAL issues are grouped together followed by INTERMEDIATE and ROUTINE issues. Within each rating group, the questions are broken down by topic where the first question for each topic starts on a new page. Refer to Figure 5-13 for an example of this report.

5.9.3 This report is formatted so that question number, question and subquestion (if applicable) appear first. This is followed by the Cost and Schedule Impact (short narrative), and a detailed action field.

5.9.4 CURRENT REVIEW SESSION. This report has the same format as the Current Weapon System Status Report. However, it contains only the answered questions entered by the analyst during the current session. Refer to Figure 5-14 for an example of this report.

5.9.5 **CRITICALITY ANALYSIS REPORT.** This report provides a summary of problem areas for the equipment being assessed. The report is grouped by rating (CRITICAL, INTERMEDIATE, or ROUTINE). It contains all questions whose last answer was NO. Within each grouping, the topics are sorted by topic number and within each topic, the questions are sorted by question number. For each question, the alert and action dates are listed. At the conclusion of each group, the total number of questions within each rating group is provided. At the end of the report, the total number of questions (e.g. TOTAL ACTIONS) counted in this report is provided. Refer to Figure 5-15 for an example of this report.

5.9.6 **WEAPON SYSTEM SUMMARY REPORT.** This report compares, by topic, the number of questions rated CRITICAL, INTERMEDIATE, and ROUTINE to the number answered satisfactorily and also includes those still remaining to be answered.

5.9.7 This report contains seven columns labeled: Process #; Title; Critical; Intermediate; Routine; Satisfactory; and To Do. It is sorted by process number and reflects only the last answer to each question. All topics are included, even if no questions were answered. The report is intended to identify those topics where a large number of problems exist, and therefore require additional effort. Refer to Figure 5-16 for an example of this report.

5.10 ALERT AND ACTION SCHEDULE DATES REPORTS

ALERT AND ACTION SCHEDULE DATES REPORTS

5.10.1 This report has two options: Alert Date List of Problem Areas; and Action Date List of Problem Areas. The Alert Date List contains a set of follow-up dates related to specific questions, while the Action Date List contains a set of completion dates related to specific actions associated with a question. Each report is a Weapon System Current Status type, but contains only those questions where dates were entered. The questions are sorted by ALERT or ACTION date.

5.10.2 ALERT DATE ITEMS LIST. This report contains all questions where the ALERT DATE has been completed. It is sorted by ALERT DATE from the oldest to the newest. There are six columns in the report that are labeled: Question, Answer, C/S Rating, P/S Rating, Alert Date, and Days Left. The report contains YES/NO/TEXT answers. For YES and TEXT answers, the ratings are blank. The Days Left column indicates the number of days remaining from the Report Date before a follow-up is required. A negative number in this column indicates that the follow-up date has passed. Refer to Figure 5-17 for an example of this report.

5.10.3 ACTION DATE ITEMS LIST. This report contains all questions where the ACTION DATE has been completed. It is sorted by ACTION DATE from the oldest to the newest. There are six columns in the report that are labeled: Question, Answer, C/S Rating, P/S Rating, Alert Date, and Days Left. The report contains YES/NO/TEXT answers. For YES and TEXT answers, the ratings are blank. The Days Left column indicates the number of days remaining from the Report Date before all actions associated with the question must be completed. A negative number in this column indicates that the actions have not been completed. Refer to Figure 5-18 for an example of this report.

ILS REVIEW

REPORT GENERATION

5-11

PAGE #: 1

10/12/90

**ASSESSMENT OF ILS MAINTENANCE PLANNING
REVIEW MANAGEMENT REPORT**

EQUIPMENT IDENTIFICATION:
<u>SYSTEM</u> : XX XX XXXXXX <u>SUBSYSTEM</u> : Not Subsystem
MILESTONE IDENTIFICATION:
<u>LOCAL ILS</u> : XXX <u>AMC PAM 70-20</u> : XXX <u>DA PAM 700-26</u> : X
PROJECT MANAGER POINT OF CONTACT:
<u>COMMAND/OFFICE</u> : XXXXXXXX <u>CONTACT NAME</u> : XXX X., XXXX <u>CONTACT PHONE</u> : 1 (XXX) -XXX-XXXX
REVIEWER REFERENCES:
<u>COMMAND/OFFICE</u> : XXXX <u>REVIEWER NAME</u> : XXXXX, XXXXXX <u>PHONE</u> : 1 (XXX) -XXX-XXXX <u>REVIEW DATE</u> : XX/XX/XX <u>AUTOVON PHONE</u> :
<u>SEND REPORT TO</u> : XXXX XXXXXX
<u>NOTES</u> :

Figure 5-2. System/Equipment Data Report

ILS REVIEW

REPORT GENERATION

5-12

**OVERALL ASSESSMENT RESULTS
WEAPON SYSTEM CURRENT STATUS**

ASSESSMENT OF MAINTENANCE PLANNING

EQUIPMENT ID: XXXXXX

MILESTONE: XXX

Page #1

REPORT DATE: XX/XX/XX

E1.1	Review Design for Logistical Impacts	Review Date XX/XX/XX	C/S INTERMED	P/S ROUTINE
------	---	-------------------------	-----------------	----------------

Summary

E1.3A1	Review Tasks or Functions to Mission Requirements	Review Date XX/XX/XX	C/S CRITICAL	P/S CRITICAL
--------	--	-------------------------	-----------------	-----------------

Summary

E1.4A1	Review (P)MAC for Accuracy & Completeness	Review Date XX/XX/XX	C/S	P/S
--------	--	-------------------------	-----	-----

Summary

E1.5A1	Assess Reliability Centered Maintenance (RCM) Results	Review Date	C/S	P/S
--------	--	-------------	-----	-----

Summary

Figure 5-3. Overall Assessment Results Report

**WEAPON SYSTEM CURRENT ILS STATUS
ASSESSMENT OF ILS MAINTENANCE PLANNING**

EQUIPMENT ID: XXXXXX

MILESTONE: XXX

PAGE #: 1

REPORT DATE: XX/XX/XX

QUESTION	ANSWER	REVIEW DATE	INIT	COST & SCHED RATING	PERF & SUST RATING	ACTION DATE
----------	--------	----------------	------	------------------------	-----------------------	----------------

E1.1 Review Design for Logistical Impacts

E1.1-01						
E1.1-02						
E1.1-03	NO	XX/XX/XX	AA	INTERMED	INTERMED	XX/XX/XX
E1.1-04						
E1.1-05	TEXT	XX/XX/XX	BB	---	---	/ /
E1.1-06						
E1.1-07						
E1.1-08						
E1.1-09						
E1.1-10						
E1.1-11						
E1.1-12						

**E1.2 Review Program Management Documentation for
Completeness**

E1.2-01						
E1.2-02						
E1.2-03	YES	XX/XX/XX	AA	---	---	/
E1.2-04						
E1.2-05	TEXT	XX/XX/XX	BB	---	---	/ /
E1.2-06	NO	XX/XX/XX	CC	ROUTINE	ROUTINE	XX/XX/XX
E1.2-07						
E1.2-08						
E1.2-09						
E1.2-10						
E1.2-11						
E1.2-12						

E1.3A1 Review Tasks or Functions to Mission Requirements

E1.3A-01
E1.3A-02
E1.3A-03
E1.3A-04
E1.3A-05

**Figure 5-4. Assessment Status Report (Weapon System
Current Status) Sheet 1 of 2**

ILS REVIEW

REPORT GENERATION

5-14

**WEAPON SYSTEM CURRENT ILS STATUS
ASSESSMENT OF ILS MAINTENANCE PLANNING**

EQUIPMENT ID: XXXXXX

MILESTONE: XXX

PAGE #: XX

REPORT DATE: XX/XX/XX

REVIEW STATUS SUMMARY

YES	10
NO	8
N/A	4
TEXT	2
UNANSWERED	198
TOTAL	222

CRITICALITY SUMMARY

	CRITICAL	INTERMEDIATE	ROUTINE
Cost and Schedule	4	3	1
Performance and Sustainability	3	3	2
Total	7	6	3

Figure 5-4. Assessment Status Report (Weapon System
Current Status) Sheet 2 of 2

**CURRENT REVIEW SESSION REPORT
ASSESSMENT OF ILS MAINTENANCE PLANNING**

EQUIPMENT ID: XX XX XXXXX
REVIEW DATE: XX/XX/XX
MILESTONE: XXX

REVIEWER: X. XXXXXX
OFFICE SYMBOL: XXXXX

PAGE #: 1

XX/XX/XX

QUESTION	ANSWER	COST & SCHED RATING	PERF & SUST RATING	ACTION DATE
E1.6A3	Review Depot Support Plans			
E1.6A3-01	YES	---	---	/ /
E1.6A3-02	YES	---	---	XX/XX/XX
E1.6A3-03	N/A	---	---	---
E1.6A4	Review ISSA, HNS, CLS, ICLS Implementation Plans			
E1.6A4-01	N/A	---	---	---
E1.6A4-02	N/A	---	---	---
E1.6A6	Review Warranty Implementation Plans			
E1.6A6-01	NO	CRITICAL	INTERMEDIATE	XX/XX/XX
E1.6A7	Review SDC Plans and Execution			
E1.6A7-01	NO	INTERMEDIATE	ROUTINE	XX/XX/XX
E1.7A1	Review Sub-Assessments for Overall Consistency			
E1.7A1-02	NO	CRITICAL	CRITICAL	XX/XX/XX
E1.7A4	Identify Actions Requiring Further Analysis for Resolution			
E1.7A4-01	YES	---	---	XX/XX/XX

Figure 5-5. Assessment Status Report (Current Review Session Report)

ILS REVIEW

REPORT GENERATION

5-16

**HISTORICAL ASSESSMENT RESULTS
ASSESSMENT OF MAINTENANCE PLANNING**

EQUIPMENT ID: XXXXXX

MILESTONE: XXX

PAGE #: XX

REPORT DATE: XX/XX/XX

PROCESS E1.1

Review Design for Logistical Impacts

----- QUESTION-----

QUESTION #: E1.1-01

Do design specifications establish logistical requirements (i.e., maintainability, reliability) to meet system readiness objectives and the operational scenarios?

ANSWER: YES SESSION DATE: XX/XX/XX REVIEWER: X. XXXXX

-----ASSESSMENT-----

ANSWER: NO SESSION DATE: XX/XX/XX REVIEWER: X. XXXXX

COST & SCHEDULE RATING: ROUTINE
COST & SCHEDULE IMPACT:

PERFORMANCE & SUSTAINABILITY RATING: ROUTINE
PERFORMANCE AND SUSTAINABILITY IMPACT:

-----ACTION-----

Figure 5-6. Assessment Results Report (Assessment History)

ILS REVIEW

REPORT GENERATION

5-17

ASSESSMENT RESULTS
WEAPON SYSTEM CURRENT STATUS
ASSESSMENT OF MAINTENANCE PLANNING

EQUIPMENT ID: XXXXXX

MILESTONE: XXX

PAGE #: XX

REPORT DATE: XX/XX/XX

PROCESS E1.1

Review Design for Logistical Impacts

----- QUESTION-----

QUESTION #: E1.1-02

How are system designers, maintenance engineers, and other logistical element managers communicating on the design and support planning effort?

-----SUBQUESTION-----

- o Explain mechanism for exchanging information.

ANSWER: TEXT SESSION DATE: XX/XX/XX REVIEWER: X. XXXXX

-----ASSESSMENT-----

Figure 5-7. Assessment Results Report (Weapons System Current Status)

ILS REVIEW

REPORT GENERATION

5-18

ASSESSMENT RESULTS
CURRENT REVIEW SESSION
ASSESSMENT OF MAINTENANCE PLANNING

EQUIPMENT ID: XXXXXX

MILESTONE: XXX

PAGE #: XX

REPORT DATE: XX/XX/XX

PROCESS E1.1

Review Design for Logistical Impacts

----- QUESTION-----

QUESTION #: E1.1-02

How are system designers, maintenance engineers, and other logistical element managers communicating on the design and support planning effort?

ANSWER: TEXT SESSION DATE: XX/XX/XX REVIEWER: X. XXXXX

-----ASSESSMENT-----

Figure 5-8. Assessment Results Report (Current Review Session)

COST AND SCHEDULE IMPACT REPORT
WEAPON SYSTEM CURRENT STATUS
ASSESSMENT OF ILS MAINTENANCE PLANNING

EQUIPMENT ID: XXXXXX
ILS MILESTONE: XXX

OFFICE SYMBOL: XXXXX

Page #: 1

Report Date: XX/XX/XX

CRITICAL ISSUE

E1.4A1 Review (P)MAC for Accuracy & Completeness
QUESTION #: E1.4A1-02

----- QUESTION-----

Do the functional group codes adequately reflect the
system from a top-down breakdown?

-----SUBQUESTION-----

-Identify functional groups that have placed at incorrect
level in the breakdown. -How will this functional group be
placed at the correct level? (The End Item Family Tree is
useful in performing this analysis.)

COST AND SCHEDULE IMPACT

(A three line text field that includes a short
explanation of the cost and/or schedule impact.)

-----ACTION-----

Figure 5-9. Cost and Schedule Impacts Report (Weapons
System Current Status)

ILS REVIEW

REPORT GENERATION

5-20

**COST AND SCHEDULE IMPACT REPORT
CURRENT REVIEW SESSION
ASSESSMENT OF ILS MAINTENANCE PLANNING**

EQUIPMENT ID: XXXXXX
ILS MILESTONE: XXX

OFFICE SYMBOL: XXXXX

Page #: 1

Report Date: XX/XX/XX

CRITICAL ISSUE

PROCESS # :E1.4A03 Review Compatibility of (P)MAC
QUESTION #: E1.4A1-02 with (B)MC

----- QUESTION-----

Have adequate and accurate task times been input into the
(P)MAC?

-----SUBQUESTION-----

-Specify whether the results of testing and demonstrations
contradict these values. -Identify the reason the times in
(P)MAC and the actual times are different (e.g., training,
publications etc.)

COST AND SCHEDULE IMPACT

81 MM Mortar

Question E1.4A03-03

XX/XX/XX

C&S Rating: Critical

Session #X Analyst: XXX XXXX

-----ACTION-----

Figure 5-10. Cost and Schedule Impacts Report (Current
Review Session Report)

COST AND SCHEDULE IMPACT REPORT
CRITICALITY ANALYSIS REPORT
ASSESSMENT OF ILS MAINTENANCE PLANNING

EQUIPMENT ID: XXXXXX
LAST SESSION DATE: XX/XX/XX

ILS MILESTONE: XXX
REVIEWER: X. XXXXXX

Page #: 1

Report Date: XX/XX/XX

-----CRITICAL-----

E1.4A1 Review (P)MAC for Accuracy & Completeness
E1.4A1-02 ALERT DATE: ACTION DATE:

E1.6A6 Review Warranty Implementation Plans
E1.6A6-01 ALERT DATE: XX/XX/XX ACTION DATE: XX/XX/XX

E1.7A1 Review Sub-Assessments for Overall Consistency
E1.7A1-02 ALERT DATE: XX/XX/XX ACTION DATE: XX/XX/XX

TOTAL CRITICAL ACTIONS: 3

-----INTERMEDIATE-----

E1.1 Review Design for Logistical Impacts.
E1.1-07 ALERT DATE: XX/XX/XX ACTION DATE: XX/XX/XX

E1.4A1 Review (P)MAC for Accuracy & Completeness
E1.4A1-03 ALERT DATE: XX/XX/XX ACTION DATE: XX/XX/XX

E1.6A7 Review SDC Plans and Execution.
E1.6A7-01 ALERT DATE: XX/XX/XX ACTION DATE: XX/XX/XX

TOTAL INTERMEDIATE ACTIONS: 3

-----ROUTINE-----

E1.2 Review Program Management Documentation for
Completeness
E1.2-07 ALERT DATE: XX/XX/XX ACTION DATE: XX/XX/XX

TOTAL ROUTINE ACTIONS: 3

SUMMARY

TOTAL ACTIONS: 7

Figure 5-11. Cost and Schedule Impacts (Criticality
Analysis)

COST AND SCHEDULE SUMMARY REPORT
ASSESSMENT OF MAINTENANCE PLANNING

EQUIPMENT ID: XXXXXX
LAST SESSION DATE: XX/XX/XX

ILS MILESTONE: XXX
REVIEWER: X. XXXXXX

Page #: 1

Report Date: XX/XX/XX

Process #	Title	Crit	Int	Rout	Sat	To Do
E1.1	Review Design for Logistical Impacts.	0	1	0	1	14
E1.2	Review Program Management Documentation for Completeness	0	0	1	5	3
E1.3A1	Review Tasks or Functions to Mission Requirements	0	0	0	0	11
E1.3A2	Review Maintenance Principles and Level of Repair.	0	0	0	0	11
E1.3A3	Review Personnel/Non-Personnel Resource Requirements	0	0	0	0	11
E1.3A4	Review (B) MC use of 3 Level Army Maintenance Structure	0	0	0	0	2
E1.3A5	Review Host Nation Support (HNS), Interservice Support	0	0	0	0	15
E1.3A6	Review Maintenance Task and Level of Repair Trade-Offs	0	0	0	0	2
E1.3A7	Assess Achievement of SPO and Supportability Objectives	0	0	0	0	3

Figure 5-12. Cost and Schedule Impacts (Weapon System Summary)

ILS REVIEW

REPORT GENERATION

5-23

PERFORMANCE AND SUSTAINABILITY REPORT
WEAPON SYSTEM CURRENT STATUS
ASSESSMENT OF ILS MAINTENANCE PLANNING

EQUIPMENT ID: XXXXXX
ILS MILESTONE: XXX

OFFICE SYMBOL: XXXXX

Page #: 1

Report Date: XX/XX/XX

CRITICAL ISSUE

E1.4A1 Review (P)MAC for Accuracy & Completeness
QUESTION #: E1.4A1-02

----- QUESTION-----
Do the functional group codes adequately reflect the
system from a top-down breakdown?

-----SUBQUESTION-----
-Identify functional groups that have placed at incorrect
level in the breakdown. -How will this functional group be
placed at the correct level? (The End Item Family Tree is
useful in performing this analysis.)

COST AND SCHEDULE IMPACT

(This is a three line text field in which a short
explanation of the performance and sustainability impact
is included.)

-----ACTION-----

Figure 5-13. Performance and Sustainability Impacts Report
(Weapons System Current Status)

ILS REVIEW

REPORT GENERATION

5-24

PERFORMANCE AND SUSTAINABILITY REPORT
CURRENT REVIEW SESSION
ASSESSMENT OF ILS MAINTENANCE PLANNING

EQUIPMENT ID: XXXXXX
ILS MILESTONE: XXX

OFFICE SYMBOL: XXXXX

Page #: 1

Report Date: XX/XX/XX

CRITICAL ISSUE

E1.4A1 Review (P)MAC for Accuracy & Completeness
QUESTION #: E1.4A1-02

----- QUESTION-----

Do the functional group codes adequately reflect the
system from a top-down breakdown?

-----SUBQUESTION-----

-Identify functional groups that have placed at incorrect
level in the breakdown. -How will this functional group be
placed at the correct level? (The End Item Family Tree is
useful in performing this analysis.)

COST AND SCHEDULE IMPACT

MS_SCHED_M -the long character field for MS_SCHED_M.
Information about this record: qn=E1.4A1-02,
sn=9007181406.

-----ACTION-----

Figure 5-14. Performance and Sustainability Impacts Report
(Current Review Session)

PERFORMANCE AND SUSTAINABILITY REPORT
CRITICALITY ANALYSIS REPORT
ASSESSMENT OF ILS MAINTENANCE PLANNING

EQUIPMENT ID: XXXXXX

ILS MILESTONE: XXX

LAST SESSION DATE: XX/XX/XX

REVIEWER: X. XXXXXX

Page #: 1

Report Date: XX/XX/XX

-----CRITICAL-----

E1.4A1 Review (P)MAC for Accuracy & Completeness
E1.4A1.02 ALERT DATE: ACTION DATE:

E1.6A6 Review Warranty Implementation Plans
E1.6A6-01 ALERT DATE: XX/XX/XX ACTION DATE: XX/XX/XX

E1.7A1 Review Sub-Assessments for Overall Consistency
E1.7A1-02 ALERT DATE: XX/XX/XX ACTION DATE: XX/XX/XX

TOTAL CRITICAL ACTIONS: 3

-----INTERMEDIATE-----

E1.1 Review Design for Logistical Impacts.
E1.1-07 ALERT DATE: XX/XX/XX ACTION DATE: XX/XX/XX

E1.4A1 Review (P)MAC for Accuracy & Completeness
E1.4A1-03 ALERT DATE: XX/XX/XX ACTION DATE: XX/XX/XX

E1.6A7 Review SDC Plans and Execution.
E1.6A7-01 ALERT DATE: XX/XX/XX ACTION DATE: XX/XX/XX

TOTAL INTERMEDIATE ACTIONS: 3

-----ROUTINE-----

E1.2 Review Program Management Documentation for
Completeness
E1.2-07 ALERT DATE: XX/XX/XX ACTION DATE: XX/XX/XX

TOTAL ROUTINE ACTIONS: 3

SUMMARY

TOTAL ACTIONS: 7

Figure 5-15. Performance and Sustainability Impacts
(Criticality Analysis)

PERFORMANCE AND SUSTAINABILITY SUMMARY REPORT
ASSESSMENT OF MAINTENANCE PLANNING

EQUIPMENT ID: XXXXXX

ILS MILESTONE: XXX

LAST SESSION DATE: XX/XX/XX

REVIEWER: X. XXXXXX

Page #: 1

Report Date: XX/XX/XX

Process #	Title	Crit	Int	Rout	Sat	To Do
E1.1	Review Design for Logistical Impacts.	0	1	0	1	14
E1.2	Review Program Management Documentation for Completeness	0	0	1	5	3
E1.3A1	Review Tasks or Functions to Mission Requirements	0	0	0	0	11
E1.3A2	Review Maintenance Principles and Level of Repair.	0	0	0	0	11
E1.3A3	Review Personnel/Non-Personnel Resource Requirements	0	0	0	0	11
E1.3A4	Review (B) MC use of 3 Level Army Maintenance Structure	0	0	0	0	2
E1.3A5	Review Host Nation Support (HNS), Interservice Support	0	0	0	0	15
E1.3A6	Review Maintenance Task and Level of Repair Trade-Offs	0	0	0	0	2
E1.3A7	Assess Achievement of SRO and Supportability Objectives	0	0	0	0	3

Figure 5-16. Performance and Sustainability Impacts
(Weapon System Summary)

ILS REVIEW

REPORT GENERATION

5-27

**ACTION DATE LIST OF PROBLEM AREAS
ASSESSMENT OF ILS MAINTENANCE PLANNING**

EQUIPMENT ID: XXXXXX
ILS MILESTONE: XXX

OFFICE SYMBOL: XXXXX

Page #: 1

Report Date: XX/XX/XX

QUESTION	ANSWER	COST & SCHED RATING	PERF & SUST RATING	ALERT DATE	DAYS LEFT
E1.7A1-02	NO	CRITICAL	CRITICAL	XX/XX/XX	-98
E1.6A7-01	NO	INTERMEDIATE	ROUTINE	XX/XX/XX	-97
E1.1-07	NO	INTERMEDIATE	INTERMEDIATE	XX/XX/XX	-69
E1.6A6-01	NO	CRITICAL	INTERMEDIATE	XX/XX/XX	228
E1.6A3-02	YES	---	---	XX/XX/XX	425

Figure 5-17. Alert and Action Schedule Dates
(Alert Date Items)

ILS REVIEW

REPORT GENERATION

5-28

**ACTION DATE LIST OF PROBLEM AREAS
ASSESSMENT OF ILS MAINTENANCE PLANNING**

EQUIPMENT ID: XXXXXX
ILS MILESTONE: XXX

OFFICE SYMBOL: XXXXX

Page #: 1

Report Date: XX/XX/XX

QUESTION	ANSWER	COST & SCHED RATING	PERF & SUST RATING	ACTION DATE	DAYS LEFT
E1.7A1-02	NO	CRITICAL	CRITICAL	XX/XX/XX	-98
E1.6A7-01	NO	INTERMEDIATE	ROUTINE	XX/XX/XX	-97
E1.1-07	NO	INTERMEDIATE	INTERMEDIATE	XX/XX/XX	-69
E1.6A6-01	NO	CRITICAL	INTERMEDIATE	XX/XX/XX	228
E1.6A3-02	YES	---	---	XX/XX/XX	425

Figure 5-18. Alert and Action Schedule Dates
(Action Date Items)

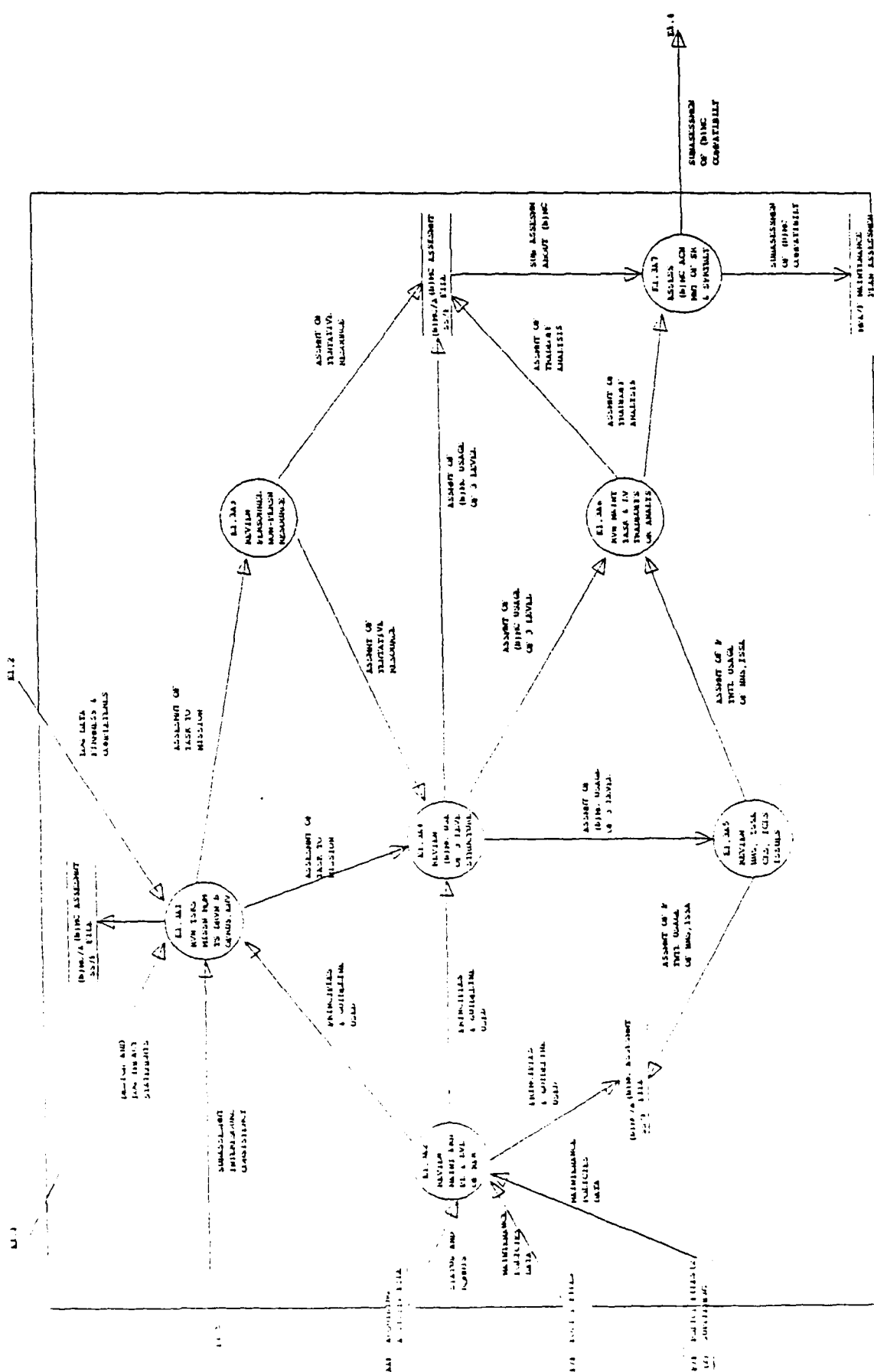
APPENDIX A

ILS ELEMENT E1

ASSESSMENT OF MAINTENANCE PLANNING

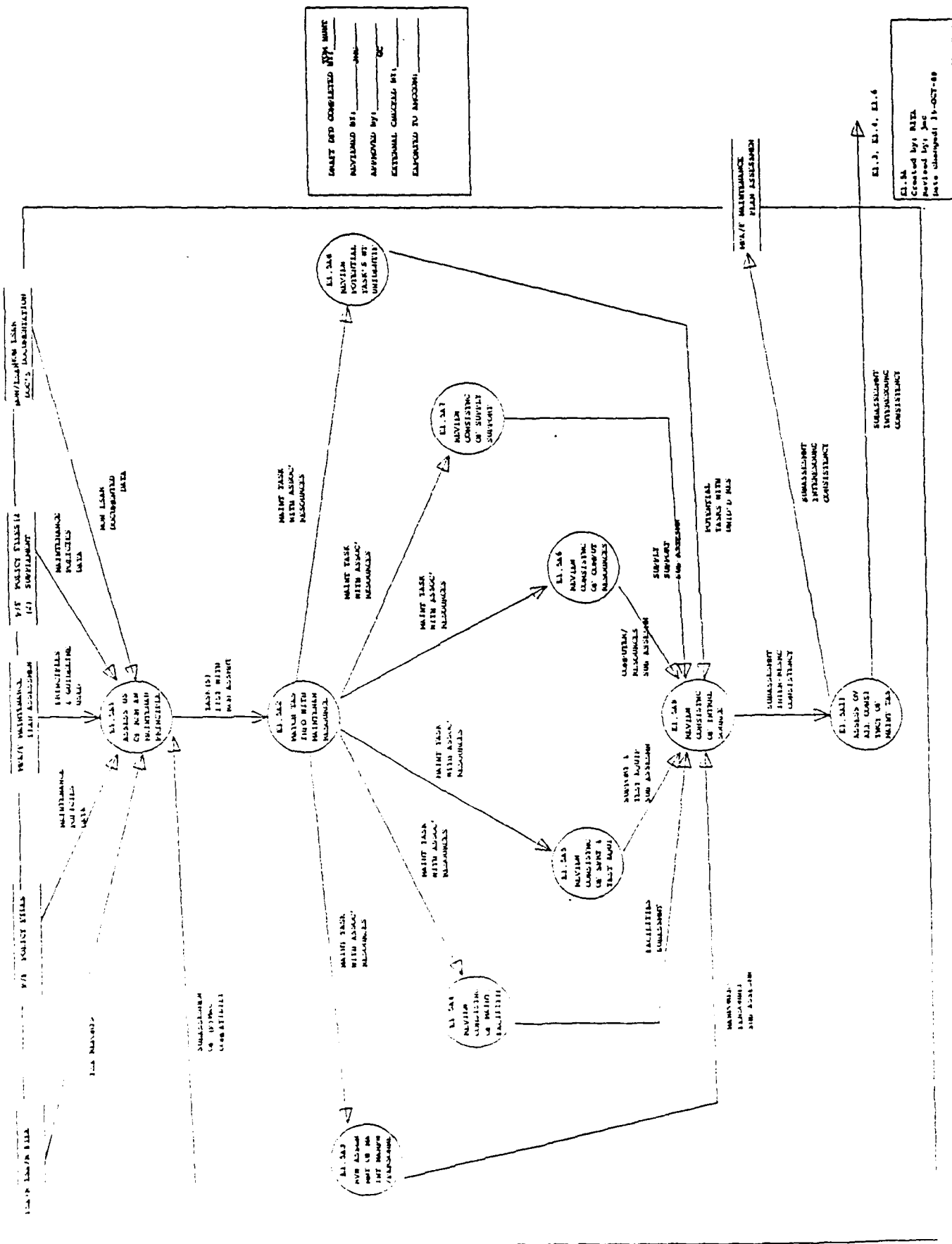
DATA FLOW DIAGRAMS

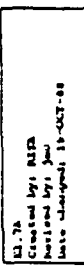




DINC/AS DINC ASSESSMENT
 REVIEWED BY: JAC
 APPROVED BY: JAC
 LATELINAL CANCELLED BY: JAC
 DISAPPROVED BY: JAC

E1.12
 Created by: JAC
 Revised by: JAC
 Date changed: 13-OCT-88





WHAT ARE COMPILED BY NAME
 RELEVANT BY NAME
 APPROVED BY NAME
 INTERNAL COUNCIL BY NAME
 REPORTING TO APPROVED

APPENDIX B

ILS ELEMENT E1 ASSESSMENT OF MAINTENANCE PLANNING

STRUCTURED DESIGN (ASSESSMENT QUESTIONS)

ILS REVIEW QUESTIONS - "MAINTENANCE PLANNING"

E1.1 - Review Design Status Assessments for Logistical Impacts

E1.1-1 Do design specifications establish logistical requirements (i.e., maintainability, reliability) to meet system readiness objectives and the operational scenarios?

- o YES
- o NO
 - Update specification to include target logistical requirements and the specific areas within the design that are to incorporate logistical design features (i.e., BITE).

E1.1-2 How are system designers, maintenance engineers and other logistical element managers communicating on the design and support planning effort?

- o Explain mechanism for exchanging information.

E1.1-3 Have logistical design parameters been incorporated into the design analytical efforts?

- o YES
- o NO
 - Why not?

E1.1-4 Have the estimated fielded quantities been identified and relayed to the logisticians? (Equipment densities have an effect on support methodologies.)

- o YES
- o NO
 - Why not?

E1.1-5 Has the expected and desired service life of the system been defined (this included any projected pre-planned product improvements?)

- o YES

- o NO

E1.1-6 How will the maintenance support concept affect system design? (What aspects of the design would be unaffected if the three level standard maintenance concept was used)?

- o Explain

E1.1-7 Have life cycle cost studies been applied to trade-off maintenance planning functions against design features?

- o YES

- Explain which parts of the design were addressed and the rationale used for the preferred decision.

- o NO

- Provide rationale for not using LCC to determine the most cost effective design.

E1.1-8 Have maintainability, reliability, testability, and transportability requirements been considered in the equipment design?

- o YES

- o NO

- Review contractual requirements, AAF, and policy files to determine extent to which these requirements are imposed on equipment designers and determine corrective actions.

E1.1-9 Did the equipment designer adequately address standardization within his design? Were parts selection, documentation, operation, and conventions (e.g., labels, warnings, wiring practices, software, screen displays, etc.) standardized?

- o YES

- Explain how and what conventions were followed.

- o NO

- Explain how the requirement for parts screening was fulfilled.

E1.1-10 Has the system designer used a modular design approach to minimize repair times and return the system to a fully mission capable condition?

- o YES
 - What approaches were taken?
- o NO
 - List external/cost factors that prohibited fully modularized design.

E1.1-11 Has the concept of discard at failure been a design consideration?

- o YES
- o NO
 - Why not?

E1.1-12 Has the equipment design used technology to improve, automate or eliminate scheduled and/or non-scheduled maintenance/calibration, operating tasks, or training.

- o YES
 - Explain
- o NO
 - Target areas for improvement by working with maintainability engineers, system designers, end item users, and trainers.

E1.1-13 Have MANPRINT objectives been adhered to?

- o YES
- o NO
 - What steps can be taken to eliminate complex or confining operating maintenance procedures? (Review system MANPRINT management plan.)

E1.1-14 Does the size and weight of the system limit the use of existing maintenance, storage, and support facilities?

- o YES

- o NO
 - What corrective actions are required to adapt existing facilities to the new system?
 - How can the design be changed to utilizing existing facilities?

E1.1-15 Have LSA task results been used to influence the design rather than as a data item submission?

- o YES
- o NO
 - What will be done to resolve potential problems between data item submissions?

E1.1-16 When the LSA process was contracted out, did the government provided data which realistically represents the conditions the system will encounter in the operational and support environment?

- o YES
- o NO
 - Why not?
 - When and how will this data be provided?

E1.2 - Review Program Management Documentation for Completeness and Firmness

E1.2-1 What stage of development are you in?:

- o Concept Exploration
- o Development and Validation
- o Full Scale Engineering and Development
- o Proof of Principle (If under Streamlined Acquisition Process)
- o Production and Deployment

E1.2-2 Based on the stage of development, to what maintenance level will the analysis be performed (i.e., unit, intermediate, depot)?

- o EXPLAIN
 - As part of the explanation, include gross maintenance concept, level at which detailed maintenance tasks are required, rationale for eliminating certain levels, and the phase in which these levels will be analyzed.

E1.2-3 Have LSA reviews been conducted to review the status of the LSA efforts to date?

- o YES
- o NO

NOTE: THE ANSWERS TO THE QUESTIONS THAT FOLLOW WILL HELP DETERMINE HOW THOROUGHLY YOU WANT (OR ARE ABLE) TO REVIEW THE MAINTENANCE PLAN.

E1.2-4 Are the required LSA tasks (per MIL-STD-1388-1A) and reports being completed on schedule?

- o YES
- o NO
 - Identify specific problem areas that may be delaying the analysis. Analyze alternatives.

E1.2-5 Based on the completed portions of the analysis, for each LSA candidate, have all the maintenance tasks or support alternatives been identified? (Status of LSA Task 401)

- o YES
- o NO
 - What problems have arisen in performing the analysis?

E1.2-6 Have the results of each LSA task been entered into the LSAR?

- o YES
- o NO

E1.2-7 Did the results of the review show that the LSAR Input Data Records have been adequately completed in accordance with LSAR requirements?

- o YES
 - Indicate whether a detailed analysis of the maintenance plan can be performed.
- o NO
 - Indicate whether an assessment of the maintenance planning can only be made at a gross level. There are many areas that can be impacted at this time.

NOTE: See Process E1.5A1 for an in-depth analysis of the LSA/LSAR process.

E1.2-8 Has the status and assessment of LSAR been documented and reported to the program Manager, ILS Manager, and ILSMT?

o YES

- Indicate if all parties in agreement with current results.
- Initiate action to incorporate comments and any problems into LSAR results.

o NO

- Prepare minutes of LSART or ILSMT which summarize findings. Provide these minutes to required agencies for questions and comments.

E1.2-9 Do the results of the Logistic Support Analysis agree with AAF (or do the results show a requirement to update an AAF document with additional information?)

o YES

o NO

- Coordinate with the activity that prepares the document and resolve the conflict or provide data necessary to update document.

E1.3A1 - Review Tasks or Functions to Mission Requirements Driven by Operations, Environment and Design

E1.3A1-1 Have the missions to include scenarios (operational & support), mission durations, required and desired performance been adequately defined in the requirements documents?

o YES

o NO

E1.3A1-2 Has adequate information been provided on deployment and basing concepts?

o YES

- Explain how the new/modified system will be deployed and how the basic concept relates to the support structure.

o NO

- Identify the agency that provides this information.

E1.3A1-3 Have all engineering groups including design, production and logistics been coordinated in the identification of potential functions and tasks during the design process?

o YES

o NO

- What will help them cooperate closely?

E1.3A1-4 Given the operational & support requirements in all environments/conditions, have the operational and support functions/tasks been identified and defined adequately?

o YES

o NO

- What functions/tasks need better definition?

- What functions/tasks need definition?

E1.3A1-5 Have the maintenance principles and level of repair guidelines chosen for the system been incorporated in the function and task determinations?

o YES

o NO

E1.3A1-6 How can existing/modified/new technology be used to eliminate tasks or functions, and improve system operation?

o EXPLAIN

E1.3A1-7 What impact does hardware and software standardization or lack thereof have on mission requirements, system operation, and operational availability?

o EXPLAIN

E1.3A1-8 Is the intended system independent of other systems or end items?

o YES

o NO

- Explain the impact of the new system. (Indicate if the two systems are interdependent. What is the effect of the interdependency on the support structure, on training, and on failed mutually dependent systems?)

E1.3A1-9 Based on the system design, does the number of individuals required to operate the system fall within the constraints of the anticipated crew size?

o YES

o NO

- Explain how such difference affects the deployment of the new system in terms of personnel requirements.

E1.3A1-10 Was the system designed for operation by an individual with the basic skills as identified in the requirement documents?

o YES

o NO

- Determine if another MOS is required for operation of the system.
- What additional skills are required?

E1.3A1-11 Will the Government have full hardware and software data rights?

o YES

o NO

- How will this affect system support?
- Identify alternative methods of supporting the system.

E1.3A2 - Review Maintenance Principles and Level of Repair Guidelines used

E1.3A2-1 Are the maintenance principles to be applied to the system in consonance with AR 750-1 policies? (For a summary of policies - see AR 750-1.)

o YES

o NO

- Explain why principles and policies do not agree

E1.3A2-2 Have level of repair policies been established?

- o YES
- o NO

E1.3A2-3 Do the level of repair policies selected agree with the mission requirements?

- o YES
- o NO
 - Select new policies that agree with mission requirements.

E1.3A2-4 Have the criteria for level of repair decisions been adequately defined?

- o YES
- o NO

E1.3A2-5 Have criteria been established for personnel skills and quantities for all levels of maintenance?

- o YES
 - Explain any effects of imposed maintenance personnel shortfall (including MOS and quantities) on maintenance concept.
- o NO

E1.3A2-6 Have criteria been established for test and support equipment to include software at each level of maintenance?

- o YES
- o NO

E1.3A2-7 Have satisfactory level of repair models (DA PAM 700-4) been selected?

- o YES
 - Identify them and the system level to which they are applied.
- o NO
 - Why were no models selected?
 - If models were selected, what was unsatisfactory?

E1.3A2-8 Has all RLA model input data been defined in either the acquiring activity files or design documentation?

- o YES
 - Explain how FMECA was used in defining RLS model input data.
- o NO
 - Identify the missing input data and request same from the appropriate Government agency or system designer.

E1.3A2-9 Has the system been broken down to the lowest logical indenture level so that the complete system can be analyzed during the RLA process:

- o YES
- o NO
 - What was the rationale for not breaking down system to its lowest levels?

E1.3A2-10 Have alternative support concepts that satisfy mission requirements been identified and used to perform the RLA (e.g., contractor support, using commercial vendor, etc.)?

- o YES
 - Identify them and the results.
- o NO
 - Determine feasibility of looking at alternate support concepts or provide the rationale for not doing so.

E1.3A2-11 Will the developing maintenance concept accommodate any special factors (e.g., proprietary data, special test equipment requirements, GFE, etc.)?

- o YES
- o NO
 - Identify each factor and how it will be resolved or the steps required to resolve it.

E1.3A3 - Review Personnel/Non-Personnel Resource Requirements

E1.3A3-1 What steps will be taken to ensure that Reliability Centered Maintenance (RCM) philosophy and logic are applied?

- o Explain

E1.3A3-2 What personnel resources will be required to provide maintenance support?

- o Explain
- o Indicate whether the estimated resources are consistent with the requirements.

E1.3A3-3 What facilities resources will be required to provide maintenance support?

- o Explain
- o Indicate if the estimated resources are consistent with the requirements.

E1.3A3-4 What support and test equipment resources will be required?

- o Explain
- o Indicate if the estimated resources are consistent with the requirements.

E1.3A3-5 What supply related resources will be required to provide maintenance support?

- o Explain
- o Indicate if the estimated resources are consistent with the requirements.

E1.3A3-6 Have operational & support costs to support the system maintenance requirements been established?

- o YES
 - How were these costs estimated?
 - To what level of accuracy and confidence are the estimates?
 - Determine whether the estimates reflect the current maintenance planning information.
 - Indicate when these will be updated.

o NO

E1.3A3-7 During this phase of system development, do all levels of maintenance have to be specified and defined?

- o YES
- o NO

E1.3A3-8 Based on the maintenance policies selected and the results of the repair level analysis for each repairable item (e.g., system, subsystem, LRU, SRU), has each maintenance task been assigned to the appropriate maintenance level?

- ☐ YES
- ☐ NO

E1.3A3-9 For each level of maintenance (Organizational, Intermediate, and Depot) and each repairable item, have the applicable maintenance functions (test, inspect, remove, replace, repair, calibrate, etc.) been identified?

- ☐ YES
- ☐ NO

E1.3A3-10 Do the maintenance functions specified at each level of maintenance adhere to policies specified in AR 750-1, and the requirements documents?

- ☐ YES
- ☐ NO

E1.3A3-11 Have alternative support concepts been identified and updated during each phase of system development?

- ☐ YES
- ☐ NO

E1.3A4 - Review (B) MC use of B Level Army Maintenance Structure

E1.3A4-1 Have parameters for turnaround times at each level and between levels been established?

- ☐ YES
- ☐ NO

E1.3A4-2 Have logistics pipeline times between levels been minimized, given cost considerations?

- ☐ YES
- ☐ NO

E1.3A5 - Review Host Nation Support (HNS), Interservice Support Agreements (ISSA), Contractor Level Support (CLS), Interim Contractor Level Support (ICLS).

E1.3A5-1 Given the selected or desired mix of the standard Army organic maintenance structure levels to be used, is usage of Host Nation Support (HNS) being considered?

o YES

- For what levels of maintenance and what locations is this support sought?
- What actions have been taken to ensure that the HNS support desired is feasible, mutually desirable and available when needed (consult AR 750-9)?
- What resources will have to be provided?
- If HNS was considered but rejected, why?

o NO

E1.3A5-2 Given the selected or desired mix of the standard Army organic maintenance structure levels to be used, is usage of Inter Service Support Agreements (ISSA) being considered?

o YES

- Explain whether the system for which support is sought is common to the service which will provide the support.
- For what levels of maintenance and what locations is this support sought?
- What actions have been taken to ensure that ISSA is feasible, mutually desired and available when needed (see DODD 4000.19 Interservice, Interdepartmental, and Interagency Support)?
- What resources will have to be provided?
- If ISSA was considered but rejected, why?

E1.3A5-3 Given the selected or desired mix of the standard Army organic maintenance structure levels to be used, is usage of Contractor Level Support being considered?

o YES

- For items where maintenance data is proprietary how is CLS going to be used?
- What cost, readiness and manpower requirements are forcing this consideration?
- What form of CLS is being considered (Interim, permanent, or support of initial fielding) and for how long?

- For what level of maintenance or specific maintenance service is CLS being considered?
- What actions have been taken to ensure CLS is feasible, and available when needed?
- What resources are required to make CLS work?
- If CLS was considered but rejected, why?

o NO

E1.3A5-4 Do adequate utilization of allocated resources and the potential use of non-organic Army support require changes in any of the maintenance tasks and/or the (B)MC?

o YES

- What changes are anticipated?
- Determine if any trade-offs between resources and/or level of repair are anticipated.
- What analysis has been done and documented to reflect this action?

o NO

- How has this been determined?
- Indicate whether an analysis was done and documented to reach this conclusion.

E1.3A5-5 Does the maintenance philosophy determined for the system, group similar maintenance tasks at the same level?

o YES

o NO

- Comment on whether the repair level analysis has to be updated.
 - How will input data be updated?
- What impact on the (B)MC will this action have?
- Indicate whether the (B)MC requires change, and if so,
- What needs to be changed?
- What is being done to make changes?

E1.3A5-6 Are maintenance tasks logically broken down from the system level through the component level, and do the maintenance levels assigned to these tasks make sense?

o YES

o NO

- Identify particular maintenance tasks that appear out of place?

FOR ITEMS DESIGNATED AS DISCARD AT FAILURE:

E1.3A5-7 Do they meet criteria for discard?

o YES

o NO

- Indicate whether these items require further analysis.
- Which items designed as discard require further analysis?
- Provide rationale for analysis.

E1.3A5-8 Are throwaway items removed and replaced at the lowest possible maintenance level?

o YES

o NO

- Identify tasks which can be performed at lower maintenance levels and the analysis being performed to evaluate these changes.

FOR EACH REPAIRABLE ITEM:

E1.3A5-9 Using FMECA &RCM analysis results, have all maintenance tasks required to return the item to working condition been identified?

o YES

o NO

- When are the maintenance tasks going to be identified?
- What future events will be affected (DT/OT, fielding, etc.)?

E1.3A5-10 Based on resources and maintainability parameters for the item under analysis, has each maintenance task been assigned to the appropriate level?

o YES

o NO

- Determine whether any trade-offs between resources and/or level of repair are anticipated.
- What analysis has been done and where is it documented?

E1.3A5-11 Are the maintenance tasks consistent with the resource which are allocated at each different level?

- o YES
- o NO
 - Indicate whether alternatives have been considered?
 - What actions have been tried to have the resource assigned to the appropriate level?
 - State whether the Maintenance task is being re-analyzed to place it at the same level as the required resource?

E1.3A5-12 For each maintenance task, have all tools, test equipment, support equipment (including computer resources and software) been adequately identified and defined?

- o YES
- o NO
 - Determine if the support equipment recommendation data agrees with the tools/TMDE/SE.
 - How can any differences between SERDs and identified equipment be resolved?
 - What additional analysis can be made to identify and document the equipment needed to perform the maintenance task?

E1.3A5-13 For each maintenance task, have training requirements been identified?

- o YES
- o NO
 - Provide maintenance tasks to training specialists for training requirements identification.

E1.3A5-14 Has each maintenance task (including associated tools, TMDE/SE) been incorporated into a technical publication, or are they planned to be incorporated?

- o YES
- o NO
 - What actions are planned to incorporate these tasks into the technical publication?

E1.3A5-15 Have safety considerations been analyzed for each maintenance task?

- o Explain safety precautions used in maintenance task development.

E1.3A6 - Review Maintenance Task and Level of Repair Trade-Offs

E1.3A6-1 Have the levels of maintenance been defined for all repairable items? (Check Supply, Maintenance, Recoverability (SMR) codes will help in this effort). Are the SMR codes proper?

- o YES
- o NO

E1.3A6-2 Are the SMR Codes Proper

- o YES
- o NO

E1.3A7 - Assess (B)MC Achievement of SRO and other Supportability Requirements

E1.3A7-1 Does the BMC retain consistency with goals/resources/ constraints and requirements (to include the SRO) given above?

- o YES
- o NO
 - What is not consistent?
 - What other (B)MC alternatives can potentially meet the requirements without changing them?
 - If the requirements need to be changed, what changes should be made.
 - What steps have been taken to change the requirements documents?

E1.3A7-2 Have maintenance tasks been placed at the appropriate level, based on task complexity and repair times, to achieve the SRO?

- o YES
- o NO
 - Determine if the task is so complex (many step or procedures) or time consuming that the next higher

- assembly should be replaced.
- How will the SRO be improved?
- What alternatives are being considered to improve maintenance repair times and the SRO?

E1.3A7-3 Has a satisfactory (P)MAC review been previously done?

- o YES
- o NO
 - Have any open action been corrected/addressed

E1.4A1 - Review (P)MAC for Level of Repair Analysis Plans and their Execution

E1.4A1-1 Has a (P)MAC been generated for all maintenance levels?

- o YES
- o NO
 - What is still required to complete one?
 - What will be done to incorporate repair analysis and RCM data in the (P)MAC?

E1.4A1-2 Do the functional group codes adequately reflect the system from a top-down breakdown?

- o YES
- o NO
 - Identify functional groups that have been placed at incorrect level in the breakdown.
 - How will this functional group be placed at the correct level? (The End Item Family Tree is useful in performing this analysis.)

E1.4A1-3 For each repairable item in the (P)MAC which is represented by a function group code, do the Maintenance Task Allocations agree with the results of the RLA?

- o YES
- o NO

E1.4A1-4 Based on the Reliability Centered Maintenance (RCM) studies, have all scheduled and preventive maintenance tasks been incorporated into the (P)MAC?

- o YES

- o NO

- Which scheduled and preventive maintenance tasks have been deleted or changed?

E1.4A1-5 Are RLA results that indicate an item can be discarded at failure, consistent with (P)MAC indications?

- o YES

- o NO

- Why does this discrepancy exist?
- If corrective actions are required, when will they be accomplished?

E1.4A1-6 Have the logistics demonstrations and other supportability testing requirements been documented and scheduled?

- o YES

- Where were they recorded (i.e., the TEMP, the log demo plan etc.)?

- o NO

E1.4A1-7 Are all unit levels and a sample of IDS and IGS maintenance to include troubleshooting tasks going to be demonstrated and evaluated against supportability criteria (e.g., MTTR, skill requirements, etc.)?

- o YES

- Identify supportability criteria and tests to be conducted.

- o NO

- How will the maintenance tasks be evaluated?
- What will the impact be at the next ILSR and IPR?

E1.4A1-8 Have all tools/TMDE/SE required to perform the maintenance tasks been obtained and scheduled to be placed at the test site?

- o YES

- o NO

- What alternatives have been considered?
- How are tools/TMDE/SE requirements going to be evaluated?

E1.4A1-9 Has the provisioning been reviewed to determine if the (P)MAC and the SMR coding agree?

- o YES
 - When was this accomplished?
 - What were the results?
- o NO
 - What is going to be done to determine if the spare parts required to perform a maintenance action have been allocated to the correct level?

E1.4A1-10 Are the Technical Manuals going to be used during (P)MAC validation to ensure that all maintenance tasks have been incorporated and placed into the correct level TM (-10, -20, -30, -40)?

- o YES
- o NO
 - How will the (P)MAC be used to evaluate the accuracy of maintenance task in the TMs?

E1.4A1-11 Has an assessment of Built-in-Test/Built-in-Test Equipment been planned?

- o YES
 - What consideration will be given to BIT/BITE not meeting design specification requirements and how will this affect the MAC?
 - How is the (P)MAC going to be reviewed to ensure that the maintenance tasks take maximum advantage of BIT/BITE?
- o NO
 - What are the risks and potential problems if BIT/BITE is not effective?

E1.4A1-12 How will the (P)MAC be reviewed against training plans and the training task selection matrix?

- o EXPLAIN

E1.4A1-13 Has planning been accomplished to assess the maintenance tasks listed on the (P)MAC against MANPRINT objectives?

- o YES
 - What are these plans and how will they be accomplished?

- o NO

E1.4A1-14 Do on the results of (P)MAC validation establish that no deficiencies exist and that documentation such as the LSAR and ILSP is complete?

- o YES

- o NO

E1.4A2 - Review (P) MAC Validation and Verification Efforts

E1.4A2-1 Has a physical tear-down been conducted?

- o YES
 - Indicate whether the top-down breakdown of the (P)MAC accurately reflects the breakdown of the system.
 - What differences if any exist?
 - List repairable assemblies which have been placed at the wrong position in the family.
 - How will differences be rectified?
 - When will the (P)MAC be restructured to adequately reflect the system?
 - What impacts on the schedule will this have?
- o NO
 - Is a physical tear-down required or has it been combined with another supportability test?
 - If it has been combined with another supportability event, describe the event, and how (P)MAC will be validated?
 - If physical tear-down is required, when will it occur, and has necessary planning been accomplished?
 - Provide rationale or explain any waiver received for skipping the PT.

E1.4A2-2 When validating the (P) MAC determine whether maintenance expenditure cost limits been identified for repairable items to include the system IAW PAR 3-4 and APP E, AR 750-1?

- o YES
 - What actions are being taken to correct situations where costs exceed the price of a repairable item?
 - Indicate whether alternative repair methods have been considered based on repair costs.
- o NO

E1.4A3 - Review Compatibility of (P) MAC with (B)MC

E1.4A3-1 Given the degree of (P)MAC validation, is it fully compatible with the stated (B)MC (no discrepancies)?

- o YES
- o NO
 - What aspects of the (P)MAC are inconsistent with the (B)MC?
 - Determine whether the (P)MAC can be readjusted and still meet the (B)MC or whether it makes more sense to realign the (B)MC with the (P)MAC.
 - Indicate if both have to be modified.
 - State whether there is a fundamental problem with either or both the (B)MC and the (P)MAC.

E1.4A3-2 Using the results of process E1.3A2, E1.3.A4, and E1.3A6, which were used to define the (B)MC, does the (P)MAC contain all required maintenance tasks for each repairable item.

- o YES
- o NO
 - Which tasks have been eliminated?
 - Why have these tasks been eliminated?

E1.4A3-3 Have adequate and accurate task times been input into the (P)MAC?

- o YES
- o NO
 - Specify whether the results of testing and demonstrations contradict these values.
 - Identify the reason the times in the P(MAC) and the actual times are different (e.g., training, publications, etc.).

- Specify whether these contradictions will cause a maintenance task to be moved from one maintenance level to another.

E1.4A3-4 Have tools and test equipment required to perform the maintenance task been identified on the (P)MAC? (If SERD exists, it will be useful in this analysis.)

- o YES
 - Determine if the tools/TMDE/SE are correctly listed and all the required tools/TMDE/SE are identified.
 - What changes/additions are required?
- o NO
 - Indicate whether an analysis been performed to identify the required tools/TMDE/SE.
 - What tools/TMDE/SE have been identified in the sequential task description?

E1.4A4 - Review to see that the SRO and Supportability Objectives are met

E1.4A4-1 Given a mutually compatible (B)MC and (P)MAC, will the SRO and other direct maintenance level structural requirements be met or have a high probability of being met?

- o YES
- o NO
 - Determine if there is a fundamental problem with the requirement?

E1.5A1 - Assess use of Reliability Centered Maintenance (RCM) and Maintenance Principles (on Tasks)

E1.5A1-1 Are you satisfied with the depth of the review concerning the (B)MC and (P)MAC?

- o YES (Go to Process E1.6A)
- o NO

ASSESSMENT CONTINUATION ON TASK BY TASK BASIS:

E1.5A1-2 Does the ILSMT Charter or an ILSMT meeting require the formation of a Logistic Support Analysis Review Team?

- o YES (See questions on LSART)

- o NO
 - How and where will LSA data, LSAR, and ILS documentation be reviewed?

LOGISTIC SUPPORT ANALYSIS REVIEW TEAM QUESTIONS:

E1.5A1-3 Has an LSART Charter been written?

- o YES
 - Update the Charter for the applicable equipment life cycle phase.
- o NO
 - Prepare an LSART Charter using DARCOM-P 700-11, Logistic Support Analysis/Logistic Support Analysis Review Team Guide.

E1.5A1-4 Does the LSART Charter identify individuals from each ILS element area listed in AR 700-127, paragraph 1-7? (Be sure to include individuals from both the materiel and the Combat Developer Areas).

- o YES
- o NO
 - Discuss with ILS Manager and ILSMT members and determine if all ILS functional areas are required, and for those required, identify organizations that should provide representatives at the LSART meetings.

E1.5A1-5 Has an LSA/LSART review guide been prepared specifically tailored to the logistic requirements of the system?

- o YES
 - Update guide for the acquisition phase.
- o NO
 - Prepare a review guide, based on logistical contractual requirements, which explains (in detail) what each ILS functional area representative is responsible for reviewing.

QUESTIONS WHICH APPLY TO ALL LSA/LSAR REVIEWS;

GUIDANCE:

Select the groups/type of maintenance tasks that you want to review for consistency of ILS resource utilization. Determine what your system's Logistics Control Numbering (LCN) system is, then select the tasks associated with the LCNs you want to review. If the system is on an automated LSAR, task information may be extracted from LSAR reports. [FIND #s]. If not fully LSAR automated, extract the manual reports that will provide this information. Do not proceed with the review until the task information you want to review is on hand, organized for efficient review. Refer to your proposed maintenance plan to include the (B)MC and (P)MAC as needed. Repeat questions on each set of maintenance tasks.

E1.5A1-6 Has an LSAR Data Element Selection Sheet (DD 1949-1 Parts I & II) been prepared?

- o YES
- o NO
 - Coordinate with ILS functional area representatives to determine which fields of LSAR Data Sheets A-J must be completed. (This Form, found in MIL-STD-1388-2A, is used to tailor LSAR preparation and is usually P/O the contract.)

E1.5A1-7 Has the LSAR Data Record A been completed for the end item, system, and each major subsystem?

- o YES
 - Update with results of testing or new requirements for each acquisition phase.
- o NO
 - Coordinate data inputs with ILS functional areas and review with the ILS Manager.

E1.5A1-8 Is A-Record data complete and in agreement with information contained in the Acquiring Agency File?

- o YES
- o NO
 - Update A-Sheet or coordinate with Agency that prepares document to incorporate changes.

E1.5A1-9 Has an LSA candidate List, along with an associated Logistic Control Numbering System, been developed IAW contractual requirements (i.e., LRU, SRU, piece part levels) in system design?

- o YES
 - Indicate if any items of the End Item family tree have been left out, including software and associated support items.
 - Determine whether additional candidates will to be added.
- o NO
 - When will the LSA Candidate List be prepared and the LCN system be in place?

E1.5A1-10 Does the Logistic Control Number (LCN) system breakdown the end item logically to the correct indenture levels? By looking at an LCN, is it possible to determine what indenture level item is called out (i.e., End item, subsystem, LRU, SRU, etc.)?

- o YES
- o NO
 - The LCN structure must be reworked.

E1.5A1-11 For each LSA Candidate identified, review the results of MIL-STD-1388-1A tasks that are contractually required against the LSAR output reports and input data sheets.

Explain any areas where a discrepancy exists, or where an incomplete analysis or report has been prepared. When a problem area has been found, develop a corrective action plan to determine the scheduled dates for completion of these actions.

Identify the maintenance task/group of tasks associated with the LCN. (LSAR output reports may be useful here).

E1.5A1-12 Is this task consistent with the maintenance principles selected for use process E1.3A2?

- o YES
- o NO
 - Determine if this should be rectified or accepted as an exception.

E1.5A2 - Match Task Information with Maintenance Resource Utilization

E1.5A2-1 Using LSA output reports 004, (or 016) 024, and 053, and the results of processes E1.3A2 and E1.3A4, does the data documented in LSAR reflect current maintenance planning?

- ☐ YES
- ☐ NO

E1.5A2-2 Were RCM principles and analyses used in determining the need for this task?

- ☐ YES
- ☐ NO

E1.5A2-3 Has RCM been correctly applied to unit level preventive and scheduled maintenance tasks as identified by LSA output reports 004, 024 and LSAR data records C and D?

- ☐ YES
- ☐ NO
 - How will system availability and readiness be impacted by not performing preventive and scheduled maintenance?

E1.5A2-4 Were level of repair analysis techniques and criteria used in allocating this task to the appropriate maintenance level?

- ☐ YES
- ☐ NO
 - What factors or resource requirements caused the allocation of this task to differ from the results of the PLS results?

E1.5A2-5 Are maintenance task allocations consistent with established Army wide maintenance policies as well as end item maintenance policies?

- ☐ YES

- o NO
 - Where do inconsistencies exist?
 - Determine if the new system/equipment is causing doctrinal changes to be made in the maintenance policies.

E1.5A2-6 Have all maintenance tasks been identified and defined for each repairable item based on the levels of repair analysis and the LSA candidate list?

(LSA reports 019, 023, 024, 029, the ILS Test & Evaluation results, LD results, and Failure Mode Effect Critical Analysis data can be used to make this analysis).

- o YES
- o NO
 - What maintenance tasks or groups of tasks have been left out?
 - How were these tasks identified through testing?
 - What is required to finalize maintenance task identification and when?

E1.5A2-7 Based on LSAR reviews, how complete are the LSAR records?

- o EXPLAIN

E1.5A3 - Review Assessment of Maintenance Manpower/Personnel Against Task Agreement

E1.5A3-1 Have all maintenance skill requirements and their estimated usage been identified? (LSA reports 001, 002, 006, 007, 011, 014, 015, 019 can help answer these questions.)

- o YES
 - Indicate if there any MOSs that are critical and projected to be in short supply when the system is fielded.
 - What efforts were taken to minimize or eliminate their usage?
 - How do the skill and personnel requirements compare with any mandatory constraints?
- o NO
 - What actions are still required to identify, define and quantify skill and personnel requirements?

E1.5A4 - Review Consistency of Maintenance Facilities for Task

E1.5A4-1 Have all maintenance tasks been reviewed to insure that all facility requirements have been addressed? (Compare LSA-15 and - 12 to assist in this.)

- o YES
 - Specify any new, modified or special facilities required at a particular maintenance level or location.
 - What planning has been done to acquire, build, capitalize, and start-up these facilities?
- o NO
 - Indicate what alternatives have been considered, if any.

E1.5A4-2 Does the person selected for tasks that do not require training have the necessary knowledge and skills to perform those tasks?

- o YES
- o NO
 - Why was no training required for such tasks?
 - Specify if these tasks are similar to other task that require training.
 - What changes, if any, have to be made to the LSAR, training plans, and programs of instruction?

E1.5A4-3 Have power and space requirements been considered for selected support equipment needed to perform maintenance at an existing facility that must be modified?

- o YES
 - What plans have been made to modify the existing facility?
 - Determine that all factors been considered.
 - Ensure that funding has been allocated to make modifications.
- o NO
 - What problems might arise if the Support Equipment is provided without such considerations?

E1.5A4-4 Are the number of unit level maintenance tasks consistent with the operators ability to perform the mission?

- o YES

o NO

- What is being done to lighten the operator's burden?
- How does this situation affect mission performance?
- If certain tasks are eliminated or allocated to another maintenance level, what will the effect be on system availability?

E1.5A4-5 Has the identified Test Measurement Diagnostic Equipment (TMDE) (to include support equipment such as fixtures), been selected either from the Army Preferred Items List or TMDE Register?

o YES

o NO

- Why can't existing TMDE be used?
- From what approved list was the equipment selected?
- Specify how the TMDE selected will have the capability to test the specified parameters.
- Otherwise, indicate what steps are being taken to correct this?

E1.5A4-6 Does MOS designate the specific individual to perform maintenance at a selected maintenance level? (A random sample of maintenance tasks from different maintenance levels should be used?)

o YES

o NO

- Determine whether there is another MOS who can perform this task or whether an existing MOS has to be trained.
- What training will be required?
- When will this training occur?
- Indicate if a new MOS will have to be developed in order to accomplish this task.
- What will be the impact of the constraint on this MOS to perform maintenance at a given level?

E1.5A5 - Review Consistency of Support and Test Equipment for Task

E1.5A5-1 Have all the support, tools, and test equipment (STTE) been identified to perform the task(s)? (LSA reports 5, 7, 8, 9, 20, 30, 70 can assist in this review.)

- o YES
 - Cross-reference and match the task(s) in the LSAR. (LSA reports 5, 13 can help identify this.)
 - Establish that all identified STTE currently exist in the inventory.
 - Explain the status of any special coordination or data interchange with other development and readiness activities, (i.e., proponent STTE PMs, item managers, BOIP manager) that is required to insure availability of STTE when needed.
- o NO
 - Which STTE is still not identified?

E1.5A5-2 Have sequential task descriptions (LSA-15) been reviewed by user personnel to determine the adequacy and accuracy of training task selection?

- o YES
 - What were the results of this review?
 - What, if any are the additional training tasks required?
- o NO
 - Specify rationale for not being required.

E1.5A5-3 For the STTE identified and not in the inventory is Special Test Equipment to be developed?

- o YES
 - What off-the-shelf commercial equipment can be considered as an alternative?
 - What equipment currently exists in the inventory that can be modified to perform the required maintenance task?
 - What plans and provisions have been made to modify existing equipment?
 - When will the new equipment be available and tested?
 - What equipments were considered and rejected?
- o NO
 - What type of STE has been identified?

E1.5A5-4 Does system training requirement for an MOS meet doctrinally allowable limits?

- o YES
- o NO
 - What actions are still required to identify, define and quantify skill and personnel requirements?
 - What actions are being taken to minimize training requirements?
 - Indicate whether maintenance tasks have been reviewed to determine elimination or allocation to a different level.
 - What was the outcome of this analysis?
 - Provide rationale for changes and impacts to the existing maintenance structure.

E1.5A5-5 Has all TMDE been selected for system calibration tasks?

- o YES
 - What arrangements have been made to obtain the required calibration equipment?
 - At what maintenance level will calibration be performed?

o NO

E1.5A5-6 For all maintenance tasks which require training using a special training device, have plans been made to acquire this training device as a part of scheduled classes?

- o YES
 - How will this training device provide realism in performing maintenance?
 - Consider whether the equipment eliminates the need for hands-on training.
 - Establish that the training device is portable and usable for a refresher or on-the-job training.

o NO

- How are required skills going to be taught prior to obtaining the training device?

E1.5A5-7 Has Automatic Test Equipment (ATE) been identified to perform maintenance?

- o YES
 - Ensure that the requirements have been coordinated with the local TPS Center.

- Determine if funding exists to develop Test Program Sets or if a strategy been developed to acquire them.
- Indicate if the support facility contains the ATE.

o No

E1.5A5-8 Have arrangements been made for logistics support of the selected STTE?

o YES

- Where is this information documented?

o NO

- What analysis is currently being performed to develop support requirements?

E1.5A5-9 Have maintenance tasks that require several tools been grouped together so a tool kit can be used?

o YES

- Determine if the required tools have been identified and a tool kit designed.
- Indicate whether a tool kit number and type designation has been obtained.

o NO

- Determine if an existing tool kit meets the requirements.
- Explain whether an existing tool kit can be modified to meet the requirements.

E1.5A5-10 During the ILS Test & Evaluation, were STTE requirements evaluated against the maintenance tasks to determine if they are correct?

o YES

- Identify any changes to the STTE that have to be made.
- What additional STTE is required?
- How are these additional STTE requirements going to be handled?

o NO

- What documentation exists that shows all STTE has been identified?
- What impact will this have on fielding?

E1.5A6 - Review Consistency of Computer Resources for Task

E1.5A6-1 Are any computer resources, to include ATE inter-connecting devices, tape and program modules, required in the execution of the maintenance task(s)? (LSA report 20 and the Computer Resources Management Plan (CRMP) will help identify this.)

- o YES
 - Indicate whether those computer resources are already in the supply system.
 - Determine if the computer resources availability after the proposed system's fielding has been coordinated with the proponent or any other outside proponent.
- o NO
 - Determine if a reasonable search of the supply system has been done to find cost effective computer resources to eliminate unnecessary proliferation and explain if rejected.

E1.5A6-2 Has the software documentation and required equipment to maintain and modify the software, after the software has been deployed, been identified and validated?

- o YES
- o NO

E1.5A6-3 Comment on the requirements design criteria and specifications for self test software including:

- Actual fault detection and isolation to meet criteria.
- System readiness objectives.
- Adequacy of design criteria and test documentation in meeting system readiness objectives.
- Ease of use.
- Successful self testing demonstration.
- Any required improvements to self test fault detection and fault isolation.

E1.5A7 Review Consistency of Supply Support for Task.

E1.5A7-1 Have the repair parts required to perform the maintenance task(s) been identified and cross referenced? (Comparing LSA report numbers 15 and 29 or reviewing the D1 and H1 sheets applicable to the task(s) under review can assist in this).

- o YES
- o NO
 - What piece parts have not been identified?

E1.5A7-2 Are the Source Maintenance Recoverability (SMR) codes properly applied for the repair parts used in this task(s)?

- o YES
- o NO
 - Indicate whether the maintenance task have to be adjusted or re-allocated.

E1.5A7-3 Have all the expendable/durable supplies for the task(s) been identified? (LSA report 43 can help in this).

- o YES
- o NO
 - What analysis is required to identify expendable/durable supplies?
 - Where will this be documented for each task?

E1.5A7-4 Do maintenance tasks requiring sets or kits have them available?

- o YES
- o NO
 - What planning has been done to formulate these sets or kits?
 - Have the contents for each been specified?

E1.5A8 Review Potential Tasks with Unidentified Resources.

E1.5A8-1 Have maintenance task functions been determined for all maintenance tasks/functions?

- o YES

- o NO
 - Determine if there is a need for the task(s) themselves.
 - What is holding up the decision for resource determination?

E1.5A8-2 Are designs frozen so that there will be no further need for improvements required to eliminate maintenance tasks?

- o YES
- o NO
 - If maintenance tasks have been eliminated, why were they?
 - Determine if an analysis of the requirements for facilities, training, STTE, Computer Resources, and repair parts was done to see if changes are required.
 - What resource changes are going to be made?

E1.5A8-3 Are design changes frozen so that there will be no increase to the maintenance tasks that have been identified?

- o YES
- o NO
 - Indicate if this analysis has been documented.
 - Determine whether an analysis has been performed to identify these new maintenance tasks and required resources.
 - What planning has been done to accommodate the new resources?

E1.5A8-4 Is the maintenance concept with tasks and resources finalized?

- o YES
- o NO
 - How will any changes impact the allocation of maintenance tasks?
 - Will these changes cause additions or deletions to maintenance resources?
 - Which resources will be affected and what plans have been made to update existing documentation?
 - Specify whether PLA and LCC models are going to be used to assess cost impacts.

E1.5A8-5 Is a decision to use HNS, ISSA, and ICS rather than organic Army Support finalized?

- o YES
- o NO
 - What factors are causing this decision to be held up?
 - What actions (i.e. additional analysis, funding authorizations, MOS's etc.) are being taken to resolve problems?
 - What impact does this unresolved support decision have on fielding the new system?

E1.5A8-6 Has ILS Testing, Technical Testing, or User Testing results, shown that no problems in the system support concept or deficiencies of maintenance resources exist?

- o YES
 - When and where were the results documented?
- o NO
 - When is testing scheduled?
 - Identify potential problems with maintenance concepts or resources.
 - Specify the problems that have been identified and the recommendations to correct them.
 - How are these recommendations going to be implemented?
 - Indicate if there are more cost-effective alternatives to be recommended.
 - What planning is required to obtain or develop any missing resources?
 - What are these alternatives?
 - How will cost effectiveness be demonstrated?

E1.5A9 Review Consistency of Inter-Resource Assignments.

FOR THE OPERATION AND MAINTENANCE TASK(S), ARE THE FOLLOWING ITEMS CONSISTENT WITH EACH OTHER:

E1.5A9-1 Are the MOSs assigned to do the tasks correct for the maintenance action?

- o YES
- o NO
 - Identify the correct MOS.

E1.5A9-2 Are the STTE identified to perform the task within the MOS skills?

- o YES
- o NO
 - What additional training is needed for this MOS to perform this task?
 - Determine whether other MOSs can do the task and if so which one(s).

E1.5A9-3 Can the task be restructured so it can be given to MOS without additional training?

- o YES
- o NO
 - How should the task be restructured?
 - Where will the analysis be documented?
 - Identify other resource requirements or changes.
 - What is the rationale for eliminating these tasks?

E1.5A9-4 Is the STTE chosen for the maintenance task normally available to the MOS at the given level of repair as indicated in the (P)MAC?

- o YES
- o NO
 - Identify any other STTE selected which is normally available at that level of repair.
 - Determine whether the maintenance task has to be allocated to a different maintenance level because of STTE requirements.
 - To what maintenance level and why?

E1.5A9-5 Are the facilities needed for the maintenance task compatible (fit and operate together) with the STTE chosen to perform the tasks?

- o YES
- o NO
 - What additional facilities are required to house STTE?
 - Indicate whether plans have been made to acquire or modify these facilities.
 - Where are they documented?
 - Determine whether alternative pieces of STTE that perform the same function but are more compatible with the facilities, have been provided.

- What were these alternatives?
- Provide rationale for selection, elimination or an alternative.

E1.5A9-6 Are the computer resources required compatible with the STTE and the facilities for the maintenance actions indicated?

- o YES
- o NO
 - Why are the computer resources incompatible with the STTE and/or the facilities?
 - Determine whether alternatives have been considered in each of the three areas to resolve this incompatibility.
 - What were these alternatives?
 - Provide rationale for selection, or elimination or an alternative.

E1.5A9-7 Are the MOSs associated with the operation and maintenance of the computer resources compatible?

- o YES
- o NO
 - Determine whether a different MOS can be identified to perform the operation and maintenance tasks.
 - Which one?
 - What, if any, additional training is required for the existing MOS to perform operation and maintenance?

E1.5A9-8 Are the STTE associated with the repair parts needed for this maintenance task compatible and effective? (i.e., are they using the right tools?)

- o YES
- o NO
 - How is this incompatibility discovered?
 - What analysis is going to be performed to resolve this incompatibility?
 - Determine whether special tools have to be designed.

E1.5A9-9 Based on the maintenance concept development does the SMP coding and the repair parts identified match?

- o YES

o NO

- Determine whether an additional maintenance level has to be added or deleted from provisioning documentation.
- Indicate if the repair parts identified will support initial fielding.
- What additional parts data is required?
- What alternatives are being developed in lieu of having spare parts?

E1.5A9-10 Based on the maintenance assessment and any ILS Test and Evaluation results, has the system readiness object been achieved?

o YES

- Explain how each SRO has been achieved and where it is documented.

o NO

- What deficiencies in the system support concept exists?
- How will these areas be corrected to improve the system support concept (e.g. availability, MTTR etc.)?
- How will required studies/analysis be updated and changed?
- Explain if requirements documentation has to be updated to allow for the difference between actual and achieved results.
- Specify if this activity has been coordinated with the proper government agencies.

E1.5A11 Assess Overall Consistency of Maintenance Tasks to Resource Allocation.

E1.5A11-1 Now that you've compared the maintenance resources associated with each maintenance task or group of tasks, what is your overall assessment of the resource-to-tasks matching? Have similar maintenance tasks that require the same resources been grouped and allocated to the same maintenance level?

o EXPLAIN

E1.6A1 Allocate Sub-Assessment Issues to Sub-Plans.

E1.6A1-1 Have the appropriate supporting documents (including policy directives) to review and assess the maintenance planning aspects been obtained and are they available for the maintenance validation and corrective plans and actions (Log demo plans, TEMP, Technical and User test plans, reports, evaluation plans and evaluations)?

o YES

o NO

E1.6A1-2 Have the appropriate supporting documents (including policy directives) to review and assess the maintenance planning aspects been obtained and are they available for Depot support planning (depot support plans, depot support coordinating conference minutes)?

o YES

o NO

E1.6A1-3 Have the appropriate supporting documents (including policy directives) to review and assess the maintenance Planning for HNS, ISSA, CLS, implementation planning (draft or approved support agreements, proposed or actual contractual clauses for CLS)?

o YES

o NO

E1.6A1-4 Have the appropriate supporting documents (including policy directives) to review and assess the maintenance planning aspects for material fielding, displaced equipment planning, maintenance capabilities activation, float planning, war reserve/prepositioned materiel planning (Letters of notification, draft/approved, material fielding plans, mission support plans, draft/approved material fielding agreements)?

o YES

o NO

E1.6A1-5 Have the appropriate supporting documents (including policy directives) to review and assess the maintenance planning been obtained and are they available for the Sample Data Collection (SDC) planning (draft/approved SDC implementation plans)?

o YES

o NO

E1.6A1-6 Have the appropriate supporting documents (including policy directives) to review and assess maintenance planning been obtained and are they available for warranty implementation (draft/approved warranty agreements)?

o YES

o NO

E1.6A1-7 Have the appropriate supporting documents (including policy directives) to review and assess Maintenance planning been obtained and are they available for Battlefield Damage and Assessment Repair (proposed/approved BDAR maintenance tasks, manuals)?

o YES

o NO

E1.6A1-8 Has the supportability Test and Evaluation objective been identified (e.g. perform all unit level maintenance tasks, sample I level, no D level, check STTE requirements, measure MTTR, Ao, MTBMA, etc.)

o YES

o NO

- How can validation plans that accurately reflect operational requirements be developed?

E1.6A1-9 Are the Supportability Test and Evaluation plans fully complaint with the established supportability objectives and system design requirements? (Plans should include verification/validation of the maintenance concept and (P)MAC.)

o YES

- Where are these plans documented?

o NO

- Indicate whether any supportability objectives have not been addressed in the plan.
- What supportability system design requirements are not being tested?
- Which logistic support resources have not been identified for evaluation?
- How will these deficiencies be addressed in updating the plan prior to testing?

E1.6A1-10 Does the Supportability Test and Evaluation Plan eliminate duplication of testing with system engineering (Reliability Tests, Maintainability Demonstrations, Publications Verification/Validation efforts and other test that can be used in satisfying supportability requirements testing)?

o YES

- What tests have been combined to efficiently utilize hardware, software and personnel resources?
- What data/test results are to be provided to logistics personnel to assess readiness parameters?
- What coordination between performing activities has been accomplished with all responsibilities assigned?
- Where are these agreements documented?
- Indicate whether all events scheduled?

o NO

- What are the reasons that validation or the maintenance concept and (P) MAC have not been combined with other testing activities?
- Explain if scheduling conflicts or lack of resource availability exist.

E1.6A2 Review Validation and Corrective Actions and Plans.

E1.6A2-1 Has the System Support Package (SSP) been formulated?

o YES

- Determine whether the guidelines of DA PAM 700-50 are being followed.
- Indicate if deviations or waivers are required and if they have been coordinated through the appropriate government agencies.

o NO

E1.6A2-2 Have the maintenance validation portions of the supportability plans been executed satisfactorily?

o YES

o NO

- What problems arose during testing?
- Who is responsible for correcting problems?
- Can and will a re-test be done?

E1.6A2-3 Does a requirement exist to validate the LSAR?

- o YES
- o NO

E1.6A2-4 Was the LSAR validated during testing or the Logistic Demonstration? (LSA-019 can be used)

- o YES
 - Indicate if the sequential task descriptions and results were adequate (i.e., maintenance procedures that might be missing; problems occurring while performing the task in accordance with the procedures, etc.).
- o NO

E1.6A2-5 Were all required Tools and Test Equipment to perform the maintenance tasks identified?

- o YES
 - What additional items, if any, will be added to the LSAR and SSP, and will they require any additional maintenance procedures?
- o NO
 - How were missing Tools identified?
 - What other mechanism will be used to provide an assessment of system support for TT/OT?
 - How will the maintenance tasks be validated for accuracy and completeness?

E1.6A2-6 Were Target Audience Personnel used to validate the LSAR?

- o YES
 - What problems arose while performing maintenance tasks?
 - Indicate if there are any problems using tools or test equipment.
 - Did a soldier have problems because he didn't understand a task or because each specific step wasn't outlined?
 - Did a soldier have problems because he couldn't reach or manipulate a tool under or behind the equipment?

o NO

- Was the technician who performed the validation tasks representative of the target audience personnel?
- What problems arose while performing maintenance tasks?
- Were there any problems using tools or test equipment?
- Did the technician have problems because he didn't understand a task or because each specific step wasn't outlined?
- Did the technician have problems because he couldn't reach or manipulate a tool under or behind the equipment?

E1.6A2-7 Did the results of the Supportability Test and Evaluation show that the system design achieved supportability objects?

o YES

- How were these results documented?
- Comment on the adequacy of the system support package.

o NO

- Identify any deficiencies that have been discovered.
- What improvements are required for maintenance planning or for required resources to achieve supportability goals.

E1.6A2-8 Has a depot support plan been developed in accordance with DA PAM 700-55?

o YES

- Indicate whether it was coordinated and approved, incorporated in the ILSP, and reviewed for currency.

o NO

- If required, why hasn't this been done and when will it be completed?

E1.6A2-9 Is system support or maintenance planning completed with no corrective or open actions outstanding?

o YES

- What is the demonstrations schedule?
- Explain whether all coordination with other government agencies has been done.

- o NO
 - List them and determine a completion date.
 - Who is responsible for completing the corrections?
 - Indicate if corrective actions have to be completed and successfully demonstrated before obtaining approval to move to the next phase.

E1.6A2-10 Are any sections in the Depot Maintenance Support Plan completed?

- o YES
- o NO
 - What sections?
 - Explain any planning or analysis that is still required.

E1.6A3 Review Depot Support Plans

E1.6A3-1 Will depot maintenance support be required for this system?

- o YES
 - What maintenance tasks have been identified for the depot system?
 - Indicate whether these tasks been derived through analysis, the basis for analysis, and when the data for this will be available.
 - What Depot has been assigned as the prime Depot?

o NO

E1.6A3-2 Has a satisfactory coordination taken place with the depot system planners?

- o YES
 - Determine if there are plans for conducting a pilot depot overhaul program to validate the depot maintenance requirements.
 - Indicate if planning been done to insure an efficient transfer of contractor responsibilities to the depot as part of the maintenance concept.
- o NO
 - Why has there been no coordination?
 - If coordination is needed, when will it occur?

E1.6A3-3 Are resources fully defined and identified?

- o YES
- o NO
 - Through what analysis are these results expected?
 - What assessments must be completed before defining additional resources?
 - Explain any problems that exist in completing this plan.

E1.6A4 Review ISSA, HNS, CLS, ICLS Implementation Plans

E1.6A4-1 If Interservice Support is part of the Maintenance Plan, has coordination with the appropriate service(s) been made?

- o YES
 - Determine if agreements have been formalized and approved, or if there are there any issues that are unresolved which are holding up an agreement.
- o NO

E1.6A4-2 If Host Nation Support is part of the Maintenance Plan, has coordination with the appropriate countries' negotiating agencies been made?

- o YES
 - Indicate if agreements have been formalized and approved, or if there are any issues that are unresolved which are holding up an agreement.
- o NO

E1.6A4-3 If Contractor Level Support (interim, fielding or permanent) is part of the Maintenance Plan, has coordination with the contracting office and potential contractor(s) been made?

- o YES
 - Identify whether the scope of the maintenance support to be contracted has been precisely defined, coordinated and accepted by the logistician and other affected agencies, and what needs to be done to make the contracting agreement acceptable.
- o NO

E1.6A5 Review Displaced Equipment Plans.

E1.6A5-1 Will this new system displace/replace equipment currently in the field?

- o YES
- o NO

E1.6A5-2 Have the displaced equipment quantities and locations been identified and has a plan been made to transfer or dispose of this equipment?

- o YES
 - Determine whether the Material Transfer Plan/Memorandum of Agreement (See DA PAM 700-XX) has been coordinated and approved by the logistician and affected agencies.
 - What maintenance assets (organizational and equipment) will this displacement affect?
- o NO
 - What remains to be done to complete this plan?
 - How and when will this be accomplished expeditiously, if such action is overdue?

E1.6A6 Review Warranty Implementation Plans

[A CONSIDERATION TO ACTUALLY FLASH THE CHECKLIST IN THE BELOW LISTED PUB SHOULD BE CONSIDERED IF THE REVIEWER WANTS IT?]

E1.6A6-1 Has a warranty clause been considered for the system or parts of the system? (See Appendix B, AMC Supplement to AR 700-139 for detail.)

- o YES
 - Was the warranty checklist and criteria in Section 1 of the above reference utilized to determine the need for a clause?
 - What is the extent of the proposed warranty?
 - Specify whether the specific warranty coverage and limitations have been formulated (See Section 11 of above reference).
 - Indicate if the implementation procedures of the warranty clauses have been coordinated with the logistician, maintenance personnel and affected agencies. (See Section 111 of above reference).

- o NO

E1.6A7 Review SDC Plans and Execution.

E1.6A7-1 Is a Sample Data Collection effort (See AR 750-37) beneficial or desired for this system?

o YES

- What is the objective of SDC?
- What essential data would be needed?
- Determine whether an analysis has been done to justify the burdens of implementing an SDC program, and if an SDC is necessary and/or cost effective.
- Indicate if an SDC plan has been coordinated with the logistician and other affected activities, and if it is approved and funded.

o NO

E1.6A7-2 If an SDC is going to be performed for the system, has a Field Procedures Guide (FPG) been prepared?

o YES

- Indicate whether the guide contains specific instructions on which TAMMS forms are to be completed, and whether it specifies additional data requirements.
- Determine whether the FPG has been approved by HQDA.

o NO

- Indicate whether this schedule coincides with the anticipated SDC initiation.

E1.6A7-3 Have plans been made to periodically evaluate the SDC data for design or system supportability improvements?

o YES

- What are the evaluation intervals?
- Comment on whether this responsibility has been assigned to the appropriate activities.
- Indicate whether channels have been established to make design change recommendations or supportability improvements.

o NO

- How will SDC data be evaluated?

E1.6A8 Review Maintenance Capabilities Activation Plan.

E1.6A8-1 Have the fielding plans been evaluated for the sequencing and timing of when maintenance capabilities will be activated to support the fielded items?

o YES

- Comment on whether the maintenance capabilities, (organization, equipment, facilities, training and parts) to support the fielded systems, will be in place to support the new equipment in accordance with the maintenance concept and allocation charts, and if not, whether this was intentional or an oversight.
- Determine whether the activation is going to be done one level (unit, intermediate, depot) at a time or if several levels can be done concurrently.
- What is the intended sequence of events (e.g. NET, Parts Lay-in, etc.)?
- Indicate if additional Logistic Resources and Maintenance Planning been scheduled to be obtained/performed, and whether interim maintenance support arrangements have been made.
- What are the interim arrangements and for how long a period?
- At what levels is a maintenance capability needed?
- Comment on whether the plans can be adjusted to better support the force.

o NO

E1.6A9 Review OPE, RCF, DX Plans.

E1.6A9-1 Have requirements/quantities for float (operational readiness float, repair cycle float) and repairable exchange (RX) items been analyzed and estimated?

o YES

- What are the requirements, if any?
(Go to next process.)

o NO

E1.6A9-2 Have actions been taken and completed to obtain authorization and allocation for the float items IAW PAR 3-37, AR 750-1 and AR 710-2?

o YES

o NO

E1.6A9-3 Are float requirements going to be reviewed periodically to determine revisions based on changes in operational plans, doctrine, policy, and maintenance planning?

- o YES
 - What is the periodicity?
 - What, if any, changes resulted from the last review, and what actions have been taken?
- o NO

E1.6A9-4 Has/Is field data going to be used to evaluate future additions/deletions to float quantities?

- o YES
 - Where will field data be obtained from?
 - Comment on whether responsibilities have been clearly defined for providing field data and using this data to perform calculations.
 - Where will these results be documented and how will they be used?
- o NO
 - How will additional requirements be determined?
 - What information will be used to determine if a float item can be removed from the supply system?

E1.6A9-5 Have actions to identify repairable items as eligible for replacement exchange at the Direct Support Level been taken per Chapter 11, AR 710-2?

- o YES
- o NO

E1.6A9-6 Are repairables for exchange at the DS level anticipated?

- o YES
- o NO
 - When will the potentially exchangeable repairables be properly coded?

E1.6A9-7 If repairable items are anticipated for exchange, when will these repairable be identified?

- o EXPLAIN

E1.6A9-8 Is there a requirement for prepositionment of this system as war reserve or POMCUS?

o YES

- Determine whether the required maintenance support for war reserve type equipment been determined, coordinated and authorized.

o NO

E1.6A10 Review Battlefield Damage and Assessment (BDAR) Plans.

E1.6A10-1 Is the application of Battlefield Damage and Repair (BDAR) principles as described in PAR. 3-38, AR 750-1 not required for this system?

o YES

o NO

- Specify if the battlefield repairs been identified and defined.
- Indicate whether actions to start BDAR technical manuals in addition to the normal TMs have been initiated. If so, when will the BDAR TMs be finalized?

E1.6A11 Consolidate Sub-Plan Assessments.

E1.6A11-1 Provide/recall a summary assessment for each Sub-plan assessment process from E1.6A2 to E1.6A10 for review. Modify any assessments if desired. Store for later recall.

E1.7A1 Review Sub-Assessments for Overall Consistency.

E1.7A1-1 From your assessment of the design for logistical impacts (E1.1):

- Identify missing operational mission scenario/fielding data which is required for the system design.
- Identify those logistical design deficiencies that will impact the system readiness objectives.
- Identify any issues which you feel significantly affects system supportability or maintenance planning?

o YES

- Are any of these issues independent?

o NO

- Comment on whether they can be combined and restructured into one issue.
- Explain any cause and effect relationships.
- Explain if any questions or issues contradict each other.
- What can be done to correct this problem?

E1.7A1-2 From your review of task documentation for firmness and completion (E1.2):

- Identify areas of the LSAR that either are incomplete or the data is very preliminary/sketchy.
- Identify those tasks that require significant analysis to develop, complete or update current maintenance planning or fully define Requirements Documentation.

o YES

- Are any of the identified tasks that are either incomplete or require data related?
- How can they be combined or restructured into one question or issue?

o NO

- What additional items identified in your review need to be grouped in the unacceptable or conditionally acceptable category?

E1.7A1-3 From your assessment of the consistency of the (B)MC to operational resources and system design; group the following in unacceptable or conditionally acceptable based on meeting SRO and other supportability requirements:

(a) Those maintenance tasks or functions that cannot be performed under the operational or environmental conditions defined as part of the mission profile for the system. (Also include maintenance tasks/functions that have not been identified).

(b) Those tasks in which RLA was not applied. Incorrect maintenance principles or policies were applied or adhered to while assigning a task to a maintenance level. Insufficient number of alternatives (including HNS, ISSA etc.) were developed when performing RLA. Tasks that were illogically or inconsistently allocated to a particular maintenance level.

(c) Those tasks having problems with personnel/non-personnel resource requirements.

(d) Any additional items you feel require a re-examination or have not been significantly analyzed.

E1.7A1-4 From your assessment of consistency between the (P)MAC against and the (B)MC; group the follow into unacceptable or conditionally acceptable based on those tasks identified in the (P)MAC which are outside the scope of the (B)MC.

(a) The (P)MAC structure vs system "top down" break down. Tasks listed in the (P)MAC that do not agree with RCM or RLA results. Areas in the (P)MAC that have missing/incorrect maintenance tasks, tools/TMDE/SE, and task times.

(b) Deficiencies in the (P)MAC that were identified through validation efforts.

(c) Gaps between the (P)MAC that developed vs the system (B)MC as defined in the Requirement Documentation. The maintenance concept in the (P) MAC meeting the system SRO or supportability objectives.

E1.7A1-5 From your assessment of consistency between maintenance tasks vs resources group the follow into unacceptable or conditionally acceptable based on those tasks that required resources not assigned or in critical demand at the particular maintenance level. Tasks that don't adhere to maintenance principals or RCM/RLA results. Overall adequacy of resources selected for each task. Also, those selected resources that do not fully meet the requirements to perform a particular maintenance task.

E1.7A1-6 From your review of sub-plans for executing the maintenance plan; group as unacceptable or conditionally acceptable those plans or portions of plans that do not specifically address, lack actions required to implement or perform maintenance according to the system (B)MC and standard Army policies and procedures.

E1.7A2 Review Actions Required to Resolve Inconsistencies.

Using the results of process E1.7A1 for each item grouped in the unacceptable or conditionally acceptable category:

E1.7A2-1 Can corrective actions or recommendations to resolve the discrepancies be developed?

- o YES
 - What are the corrective actions or recommendation that need to be performed?
 - What milestones will be impacted if these corrective actions or recommendations are not performed?
 - What alternatives or "work-arounds" can be developed to resolve or alleviate the discrepancy?
- o NO
 - Which discrepancies lack clear or obvious solutions?

E1.7A2-2 Have the corrective action/recommendations been broken down to easily performed and assignable steps?

- o YES
- o NO

E1.7A2-3 Does the action consist of steps that need to be performed by different functional areas?

- o YES
- o NO
 - What can be done to break the action into pieces?
 - What are the inter-relationships between the functional areas?

E1.7A3 Recommend or Direct Corrective Action.

E1.7A3-1 As the reviewer, can you execute the solution for the corrective action or recommendation?

- o YES
 - What is your planned course of action?
 - What is the "get-well" date?
 - Determine if the "get-well" date occurs prior to the required milestone?
 - How will resolution of this issue impact the milestone decision?
 - What portion of the corrective action can be completed prior to the milestone decision?

o NO

- What functional areas can this action be directed to?
- Determine if coordination taken place with the functional area, to understand the criticality of the action being resolved prior to the milestone decision date?
- When will this coordination occur?
- What information is required to be presented to the functional area?

E1.7A4 Identify Actions Requiring Further Analysis for Resolution of Unacceptable/Conditional Assessment.

E1.7A4-1 If further analysis is required to resolve unacceptable or conditional assessments:

- What further type of analysis, planning, or coordination is required (e.g. RLA, Trade-Off Analysis, Task Analysis, Demonstrations, Design changes, etc.)?
- What resources are required to perform these analysis and who will perform them?
- If additional planning or coordination is required, what groups or agencies need to be involved and what documents are effected?
- What planning needs to be done to schedule the analysis and use the results to update specific sections or the complete maintenance plan? LSAR? Requirements Documents? Other Related Logistic Documents?
- Indicate if the analysis can be completed (to include appropriate updates) prior to milestone decision.

o YES

o NO

- What impact will this have on the meeting milestone requirements?
- How will these problem areas be addressed?

E1.7A5 Write Maintenance Plan Assessment

E1.7A5-1 Does the system maintenance concept adhere to the principle of AR 750-1?

o YES

- o NO
 - What principles does the system maintenance concept violate?
 - Explain any discrepancies and why they are acceptable.

E1.7A5-2 Has a maintenance tradeoff analysis been performed?

- o YES
 - When and where are the results documented?

- o NO
 - When will a trade-off analysis be performed?

E1.7A5-3 Were the results of the trade-off analysis adequate?

- o YES
- o NO
 - Explain
 - Have all maintenance tasks required to meet the SRO been identified and accurately developed?
 - Explain results based on sub-assessments.

E1.7A5-4 Have all resources required to perform maintenance at each maintenance level been identified and are they available in sufficient quantity to meet the need?

- o EXPLAIN

E1.7A5-5 What are the difference between the anticipated and actual support concepts on system design, SRO, acquisition, O&S costs and other ILS elements.

- o Explain the reasons differences exist, whether they are and how they developed.

E1.7A5-6 Were ISSA, HNS, ICS, CLS, BDAR, and contractor warranties used effectively and economically?

- o Explain what situations the support alternatives were used and why it was more economical.

E1.7A5-7 What problems are anticipated for developing organic support capabilities?

- How will these problems be resolved?
- What is the status of Depot Support Planning?
- Are the activities outlined in the Depot Support Plan underway?
- o YES
 - Explain the progress made toward accomplishing each activity and planned completion dates.
- o NO
 - Discuss the impact on material fielding or current milestone decisions.

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