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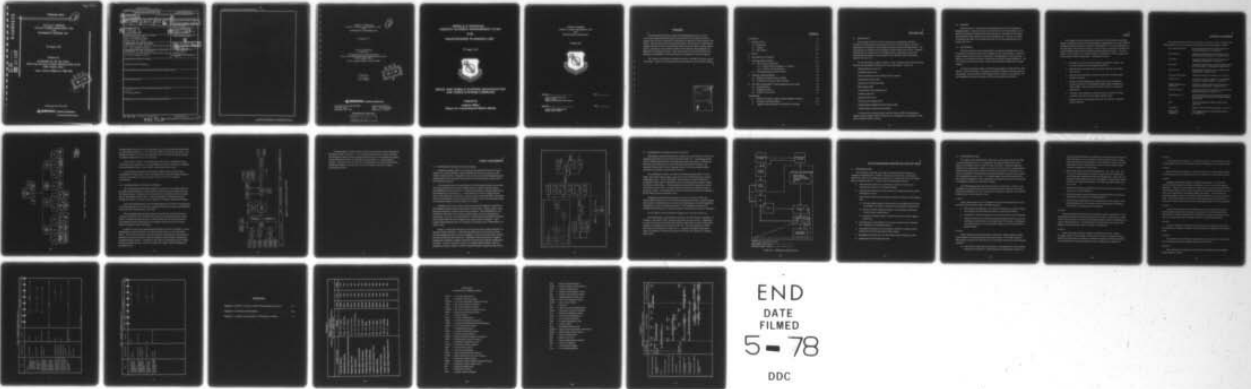
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MISSILE-X PROGRAM  
LOGISTIC ELEMENT MANAGEMENT PLAN  
FOR  
MAINTENANCE PLANNING LEM


22 August 1977

Prepared for  
DEPARTMENT OF THE AIR FORCE  
SPACE AND MISSILE SYSTEMS ORGANIZATION (AFSC)  
ICBM Program Office

Under Contract F04606-76-A-0087-R901

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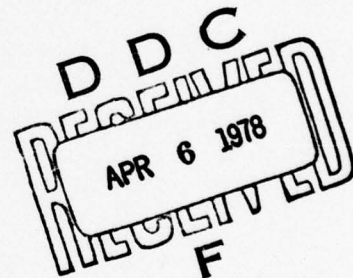
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MISSILE-X PROGRAM  
LOGISTIC ELEMENT MANAGEMENT PLAN  
FOR  
MAINTENANCE PLANNING LEM

22 August 1977

One of 12 LEM Plans  
Prepared for  
DEPARTMENT OF THE AIR FORCE  
SPACE AND MISSILE SYSTEMS ORGANIZATION (AFSC)  
ICBM Program Office  
Under Contract F04606-76-A-0087-R901 ✓

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**MISSILE-X PROGRAM  
LOGISTIC ELEMENT MANAGEMENT PLAN  
FOR  
MAINTENANCE PLANNING LEM**

22 August 1977



**SPACE AND MISSILE SYSTEMS ORGANIZATION  
AIR FORCE SYSTEMS COMMAND**

**Prepared by  
Logistics (MNL)  
Deputy for Intercontinental Ballistic Missiles**

MISSILE-X PROGRAM  
LOGISTIC ELEMENT MANAGEMENT PLAN  
FOR  
MAINTENANCE PLANNING LEM

22 August 1977



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## FOREWORD

This Maintenance Planning Logistic Element Management Plan is one of twelve plans supplementing the guidance and direction for the Integrated Logistic Support (ILS) program as delineated in the Missile-X Integrated Logistic Support Plan (ILSP). Whereas the ILSP provides general guidance and direction for integrating all logistic elements into the overall program requirements, this plan treats the specific actions, milestones, and coordination efforts of the Logistic Element Manager for Maintenance Planning (MP-LEM). It has been written to assist the MP-LEM in fulfilling his responsibilities toward achieving the ILS objectives of the MX Program.

The majority of information contained in Sections 1 through 4 herein is common to all plans. Sections 5 and 6 present information pertinent to the MP-LEM's efforts.

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# 1 INTRODUCTION

## 1.1 BACKGROUND

In accordance with DoD Directive 4100.35, the promulgating authority of AFR 800-8, and the guidance provided by AFP 800-7, the MX Program Office has implemented an Integrated Logistic Support program for the MX Weapon System. The ILS program, as delineated in the Integrated Logistic Support Plan (ILSP), is intended to ensure that the weapon system is designed with due consideration given to its supportability and that the required support will be attained within an affordable, minimum life cycle cost.

For the MX System, logistic elements – areas of support activity that collectively comprise the management concept of ILS – have been defined. These are:

- Maintainability Interface (M)
- Reliability Interface (R)
- Nuclear Hardness and Survivability Interface (NH&S)
- Maintenance Planning (MP)
- Support and Test Equipment (SE)
- Supply Support (SS)
- Transportation and Packaging (T&P)
- Technical Data (TD)
- Support Facilities (SF)
- Personnel and Training (P&T)
- Logistic Support Management Information (LSMI)
- Logistic Support Resource Funds (LSRF)

For each area of support activity, the MX Program Office has designated a logistic element manager (LEM) responsible for managing the accomplishment of the tasks associated with his element.

## 1.2 PURPOSE

This document is a Logistic Element Management Plan for the Maintenance Planning element. It has been written to provide the MP-LEM with guidance in managing the Maintenance Planning element and ensuring the integration of ILS maintenance planning requirements into the system design process. This plan, and those developed for the other eleven logistic elements, will become supplementary documents to the ILSP.

## 1.3 MX PROGRAM

The MX Program has been implemented to provide the technology base for the development of an improved land-based strategic missile weapon system. Efforts are being directed toward the design, development, and deployment of an ICBM system within one of two nuclear hardened, multiple aim point (MAP) basing alternatives. The two currently favored basing options are the buried-trench and shelter-based weapon systems.

Full scale development (FSD) of the MX Weapon System is divided into two major efforts: missile development, including the missile and canister; and weapon system development, which includes the MAP basing hardware, software, and facilities, and the integration of the missile/canister with these equipments and facilities.

This Logistic Element Management Plan structures the maintenance planning logistic requirements of the ILSP into identifiable responsibilities of the MP-LEM and delineates the tasks associated with these responsibilities. The plan is applicable to the FSD phase of the MX Weapon System, with overlap to the preceding validation and system definition phases and succeeding production/deployment phases. The plan applies to all elements of the weapon system, including the air vehicle, support functions, and the selected basing option. In addition, this plan:

- a. Provides an overview of the MX program management concept, and the LEMs' position in the management structure.
- b. Describes the ILS program and the function of the MP-LEM within that program.
- c. Describes the participation of the MP-LEM in the ILS Management Information System.
- d. Indicates the interdependencies among tasks and the coordination among all members of the Integrated Logistic Support Management Team (ILSMT), the project element officers (PEOs), and systems engineering.
- e. Presents a basic schedule for the performance of tasks by relating each task to the time frame of major program events.
- f. Indicates the interrelationships of the MP-LEM with the remaining logistic elements.

## REFERENCE DOCUMENTS

The following document listing is provided as a reference source relating to the implementation of an ILS program and the Maintenance Planning logistic element.

DoD Directive 4100.35	Development of Integrated Logistic Support for Systems/Equipment, 1 October 1970
DoD 4100.35G	Integrated Logistic Support Planning Guide for DoD Systems and Equipment, 15 October 1968
AFR 800-8	Integrated Logistic Support (ILS) Program for Systems and Equipment, 27 July 1972
AFP 800-7	Integrated Logistic Support Implementation Guide for DoD Systems and Equipments, March 1972
MIL-STD-470	Maintainability Requirements (for Systems and Equipments), 21 March 1966
AFLCM/AFSCM 800-4	Optimum Repair Level Analysis, 25 June 1971
AFSCP 800-21	A Guide for Program Managers: Implementing Integrated Logistics Support, 18 June 1974
SAMSO Supplement to AFR 800-8	Integrated Logistic Support (ILS) Program for Systems and Equipment, 7 September 1976
ICBM PO ED 77-6	System Requirements Analysis Programs for the MX Weapon System, 24 May 1977
ICBM PO ED 77-3	ICBM Program Office Engineering Directive for the Integrated Test Plan for MX Weapon System, 22 June 1977
ILSP	Missile-X Integrated Logistic Support Plan, June 1977
PO Manual	ICBM PO Project Officers' Manual, 1 July 1976
SAMSO/MNL Publication	ILS Management Information System Report, 31 August 1977

## 4 PROGRAM MANAGEMENT

Management of the MX Weapon System Program is the responsibility of the ICBM Program Office. The Program Manager has the overall responsibility for acquisition and integration management of the program, and is supported by the following Directorates within the ICBM Program Office:

- Logistics
- Engineering
- System Acquisition Management Support
- Procurement and Production
- Deployment
- Program Control

The ICBM Program Office comprises a team of Air Force and contractor personnel. That office operates within a functionally decentralized organizational structure, which has resulted in the implementation of the Project Element Management System. In this system, the program is divided into a series of discrete, functional elements, each managed as an entity by a designated project element officer responsible for monitoring the technical, cost, and schedule performance of one or more MX associate contractors. No prime contractor will be designated for the MX Program. Rather, the ICBM Program Office will function as the system integrator.

### 4.1 ILS PROGRAM ORGANIZATION

#### 4.1.1 Deputy Program Manager for Logistics

The Deputy Program Manager for Logistics (DPML) was assigned from HQ AFLC with the concurrence of the MX Program Manager, and serves as the focal point for MX logistics management. The DPML and his organization are an integral part of

the ICBM Program Office and form the Directorate of Logistics (MNL). Within the MX Program, it is the responsibility of the DPML to assure that:

- a. Continuous attention is given to logistic support posture and costs throughout the acquisition process.
- b. Tradeoff studies affecting system design are evaluated to determine their impact on supportability, life cycle cost, and operational requirements.
- c. All objectives of ILS are achieved for the MX Weapon System.

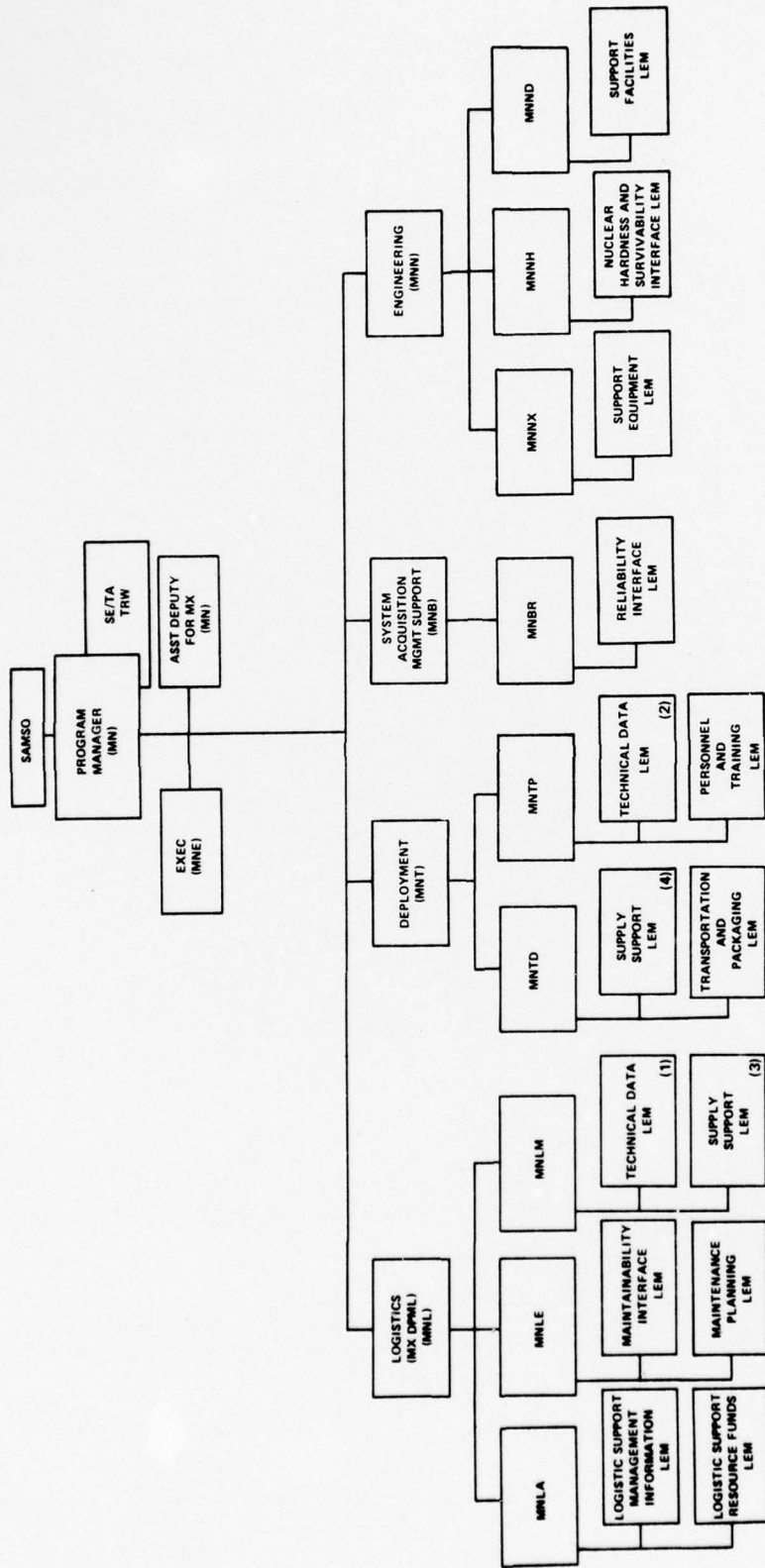
The DPML will draw upon the support of the designated logistic element managers to obtain timely contributions to those system design and support decisions which affect logistic support costs and effectiveness throughout the life of the system.

#### 4.1.2 Logistic Element Managers

As discussed in paragraph 4, the Program Office operates within a functionally decentralized organization structure. This decentralization has positioned ILS elements (as defined by AFR 800-8) outside of the Logistics Directorate, in company with those engineering design elements (e.g., Reliability) normally external to the logistics organization. Logistic element managers have been designated within each functional logistic-related area. In addition, the Technical Data and Supply Support elements are further separated into subelements to gain maximum benefits from the decentralized organizational structure. The elements, by Directorate, are shown in Figure 4-1.

The manager for each element is the single point of contact for the DPML in the management of all logistic integration aspects of the assigned element. The LEM assures that the tasks associated with his element, as defined within this Logistic Element Management Plan, are accomplished. He provides liaison and coordination among the other logistic element managers as required for the achievement of integrated logistic support. He further assures that all relevant ILS data are collected, analyzed, reported, and disseminated, as appropriate, for his element.

Each LEM also plays a key role in supporting the Program Office's function as integrating agency of all associate contractor activities. The MP-LEM supports engineering personnel and the PEOs by providing the management assistance needed to identify the contractual requirements relative to his element. In so doing,



SUBELEMENTS:  
 (1) Engineering Data  
 (2) Technical Orders  
 (3) Operational  
 (4) Preparational

Figure 4-1. MX Program Logistic Element Managers

he assures that a system integration approach is used in determining the requirements for each associate contractor. Due to the large number of associates involved, a significant coordination effort will be required from the LEM within his logistic element to maintain cognizance of the overall activities.

Each LEM is a member of the Integrated Logistic Support Management Team, and through active participation as a team member he supports the DPML in managing the accomplishment of the Program Office's acquisition logistics tasks.

It is through the exchange of information at ILSMT meetings and the inter-relationships of LEMs that the DPML will acquire the program information necessary to assure the integration of logistic support elements into the total program requirements.

#### 4.2 ILS MANAGEMENT INFORMATION SYSTEM

The ILS Management Information System was developed to assist the DPML and all logistic element managers in their efforts to achieve the logistic objectives of the MX Weapon System. Management and direction of the information system's activities are the responsibility of the DPML. This responsibility is discharged primarily through his position as chairman of the ILSMT and of technical interchange meetings.

Successful implementation of the ILS MIS depends on each LEM's accomplishment of the tasks delineated in his LEM plan, through fulfilling his reporting responsibilities, and through active participation in the ILSMT.

The ILS Management Information System Report dated 1 June 1977 provides a complete description of the ILS MIS and the LEMs' role in implementing the system. Figure 4-2 depicts the information flow of the ILS MIS, and will serve as an aid in understanding the data input/output and coordination activities of the MP-LEM as defined in Sections 5 and 6 of this plan.

In general, much of the management information will involve estimates, or other planning data in which the quality of the data used will vary over some acceptable range. The criteria provided for use by the LEMs in describing the relative quality of MIS data are presented in tables within the Integrated Logistic Support Management Information System Report. Assistance to the LEMs for participating in the ILS MIS, as both contributor and user, will be provided by the Logistic Support Management Information LEM.

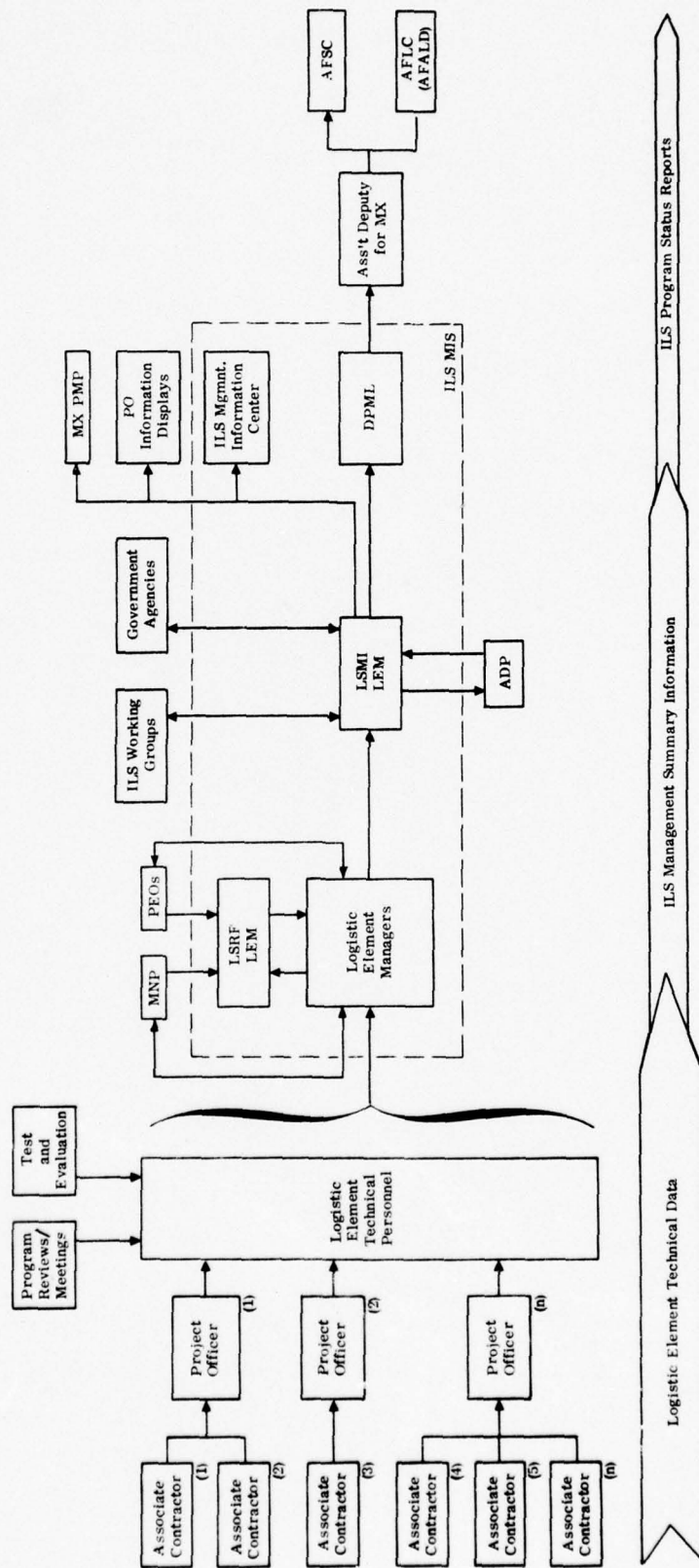


Figure 4-2. Information Flow of the ILS MIS

A typical schedule showing program events for the logistic element addressed in this plan is shown in Appendix C. This schedule depicts the general type of information required as input to the management information system for tracking the progress of each associate contractor in fulfilling the requirements for a specific logistic element. This type of information is also a prerequisite to the LEM's effort of tailoring the task schedule shown in Table 6-1 to each associate contractor's unique development activities.

## GENERAL REQUIREMENTS

### 5.1 INTEGRATED LOGISTIC SUPPORT PROGRAM

Integrated Logistic Support is a concept that encompasses the total and timely support of a system/equipment, within acceptable life cycle cost criteria, for the duration of its useful life. Realization of this concept is achieved through planning and analysis tasks for the subsequent procurement of all required support as part of the total acquisition process.

An ILS program has been implemented for the MX Weapon System to assure that the ILS concept impacts the system design process in a manner that will improve supportability and control O&S costs. Within the ILS program, logistic elements have been identified (see paragraph 1.1). These elements are areas of support activity which, when collectively considered, provide the basis for the acquisition of the human, material, and financial resources required to maintain a system in an acceptable state of operational readiness within affordable cost criteria.

Essentials of the ILS program include the analysis and definition of quantitative and qualitative logistic support requirements; the prediction of logistic support costs; and the performance of tradeoff studies and evaluations. The responsibility for performance of these efforts rests with the ICBM Program Office and its supporting directorates. However, the responsibility for monitoring and assuring the accomplishment of these efforts has been assigned to the logistic element managers. Each Logistic Element Management Plan delineates the detailed areas of responsibility for a specific LEM.

Figure 5-1 depicts the information flow among the various LEMs during the performance of their ILS efforts. While the information flow will primarily be in the direction indicated by the arrows in that diagram, situations will arise where information must be passed in both directions. Additionally, the information flow might be influenced by variations in logistic information requirements among the configuration end items. Figure 5-1a (inset in Figure 5-1) indicates that the impact of the ILS concept on the system design is achieved through the logistic support analysis efforts.

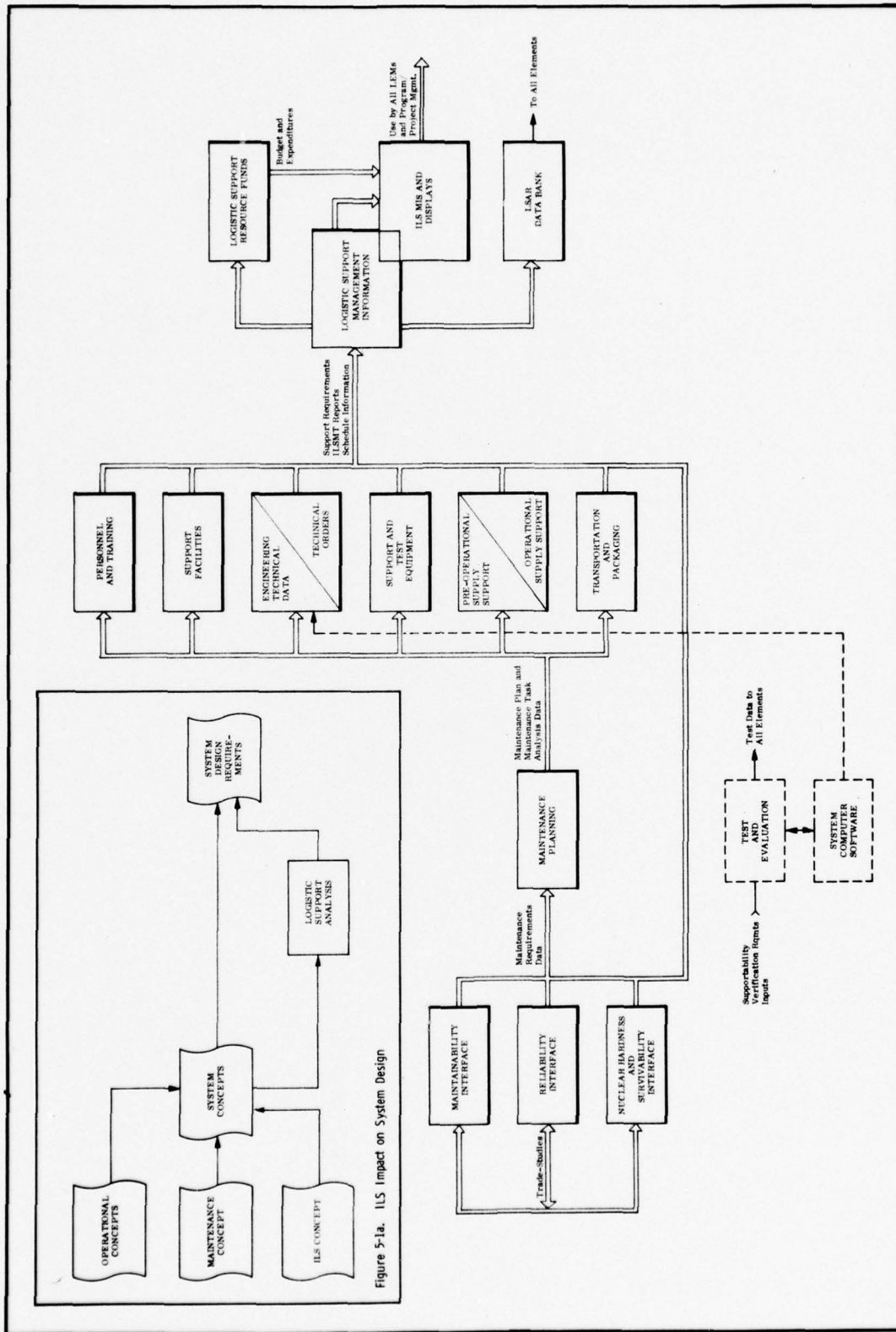


Figure 5-1. Primary Interface Relationships of Logistic Elements

## 5.2 MAINTENANCE PLANNING LOGISTIC ELEMENT

Maintenance planning establishes the concepts and requirements for each level of equipment maintenance to be performed during its useful life. The planning activity includes defining the actions and supporting requirements necessary to maintain the MX System and equipment in its prescribed state of operational readiness, and assurance that the system will be maintained with the most economically feasible expenditure of manpower and financial resources.

The maintenance concept, an output of coordinated planning efforts of AFLC, AFSC, and the MX Program Office, has evolved from the MX Employment Concept established by SAC. For the MX System, this provides for logistic support and a maintenance repair/replace capability directed toward keeping the maximum number of missiles on alert status. The maintenance and operational concepts were formulated concurrently to assure an integrated system concept upon which the design of hardware is based. The maintenance concept is definitized through the development of the MX Weapon System Maintenance Plan.

Maintenance planning employs optimum repair level analysis (ORLA) and logistic support analysis (LSA) to definitize the maintenance concept, establish support requirements, substantiate proposed supporting design changes, and refine/update the maintenance plan for operational applications. The Maintenance Planning LEM validates the maintenance plan during development and operational tests and evaluations.

A flow diagram of the maintenance planning cycle is shown in Figure 5-2.

In the performance of his assurance functions, the MP-LEM will coordinate, as necessary, with PEOs, OPRs, systems engineering, and other LEMs. Additionally, in areas such as test and evaluation and software support that do not have LEM representation, coordination may be required with POs. His membership in the ILSMT will require the preparation of status reports, initiation of problem/impact statements, development of schedule information for the MIS, and resolution of assigned action items.



## MP-LEM MANAGEMENT RESPONSIBILITIES AND TASKS

### 6.1 RESPONSIBILITIES

The Maintenance Planning LEM assists the Deputy Program Manager for Logistics in establishing the concepts, requirements, procedures, and resources required for each level of equipment maintenance to be performed on the MX Weapon System during its useful life. The MP-LEM's responsibilities include:

- a. Assuring that a system-level maintenance concept is developed and employed as the basis for all logistic planning
- b. Assuring that all logistic element activities are integrated with the system maintenance concept
- c. Assuring that each associate hardware contractor conducts an LSA program that:
  - 1) Develops logistic support requirements for all configuration end items and identifies cost effective methods for meeting these requirements
  - 2) Influences system/equipment design in areas affecting maintenance, to ensure system supportability
  - 3) Integrates all logistic support requirements into the system engineering process.
- d. Assuring that the supportability of the weapon system has been assessed by a verification and validation program
- e. Assuring the integration of each associate contractor's logistic support efforts into the total weapon system ILS program
- f. Managing the development of the MX Weapon System Maintenance Plan
- g. Supporting the ILS Management Team.

## 6.2 MANAGEMENT TASKS

The scope of each task identified in this plan must be tailored by the MP-LEM for each specific procurement. Consequently, the applicable data items and the degree of coordination will vary with the scope of the task. While these tasks are intended to be comprehensive relative to the scope of the MP-LEM's responsibilities, additional tasks may become apparent during the implementation of this plan. The LEM is responsible for assuring that these additional tasks are planned and scheduled for each applicable procurement. The additional tasks should be documented, this plan updated as applicable, and the appropriate information provided to the LSMI-LEM for updating the MIS and the information displays.

The following paragraphs describe the tasks to be performed. Table 6-1 (see paragraph 6.3) presents a task summary and indicates by the respective columns of the table the applicable data items and expected coordination required, and a schedule relating tasks to major program events.

### ● Task 1

Assure implementation of an ILS program by each associate contractor and the Assembly Test and System Support (AT&SS) contractor.

- a. Ensure that each statement of work (SOW), specification, and RFP contains the necessary ILS information and delivery requirements (CDRLs).
- b. Participate in the source selection process with respect to the ILS program.
- c. Monitor contractors' ILS activities following contract awards to ensure that maintenance requirements are an integral part of the design, development, and tradeoff process and are thoroughly integrated with all other aspects of logistic support.

### ● Task 2

Assure that each associate contractor implements a logistic support analysis (LSA) program in accordance with the SOW requirements. The AT&SS contractor will perform a system-level LSA based on the information developed by each associate contractor.

- a. Assure that a maintenance task analysis is accomplished for each identified maintenance requirement. Initiate this task by assuring that maintenance

requirements analysis data are adequately recorded on the B forms and/or LSAR data sheets C and D during the conduct of SRA activities. Assure that maintenance task analysis data are also adequately recorded on LSAR data sheets C and D, and that there is a one-to-one correlation of task analysis to maintenance requirements.

- b. Assure that liaison is performed among the SS-, SE-, P&T-, SF-, and TD-LEMs to verify that their respective support element requirements can be adequately identified from the task analysis data. Assure the compatibility of task analysis data with the quantitative maintainability requirements for the equipment/subsystem. Coordinate this latter activity with the M-LEM.
- c. Assure that maintenance analyses performed by the various associate contractors are reviewed/approved.
- d. Assure that copies of each maintenance analysis performed by associate contractors are provided to the AT&SS contractor.
- e. Assure that the LSAR data for each configuration end item (CEI) is made readily available for use in activities such as maintenance manloading, provisioning, and technical data development.

● Task 3

Assure that ORLAs performed by all contractors employ a standard set of criteria consistent with the system-level maintenance concept. Assure that the results of ORLA for each item are recorded in the allocated spaces (labeled maintenance concept) in LSAR data sheet B. Accomplish this task through close coordination with logistic technical personnel, PEOs, M-LEM, and NH&S-LEM.

● Task 4

Assure that close and effective liaison is maintained with SAC, OOALC, Aerospace Guidance and Metrology Center (AGMC), and other necessary agencies. Ensure that these agencies maintain an awareness of system development progress and of maintenance requirements that they may be responsible for supporting.

- Task 5

Assure that AGMC prepares, in successive iterations, a depot support concept, a depot support plan, and a maintenance plan for the MX guidance and control system.

- Task 6

Assure that OOALC prepares, in successive iterations, a depot support concept, a maintenance plan, and a support plan for the remainder of the MX Weapon System.

- Task 7

Support the preparation/update of logistic documentation. The MP-LEM reviews/develops/updates information contained in or to be a part of MX program documents. Guidance for the performance of this task will be provided by the DPML. The documents involved will be those developed by the Logistics Directorate, as well as by other organizations, that contain logistic information. The MP-LEM will develop the logistic-related maintenance planning information required for each document. This effort will require coordination with engineering, the OPRs for each document, and other LEMs involved in providing logistic inputs to the documentation.

- Task 8

Assure that an evaluation and certification of the MX maintenance system is performed with respect to its readiness for deployment. Coordinate with SAC to ensure that the required information is available to the missile maintenance community for a smooth maintenance transition at initial operating capability (IOC).

- Task 9

Assist in defining the fault isolation and maintenance management which SAC will implement to achieve an effective missile-maintenance capability by the deployed units.

- Task 10

Assure that a plan is developed, through successive iterations, for the transition of maintenance from the AT&SS contractor to SAC at IOC.

- Task 11

Plan, supervise, coordinate and evaluate the accomplishment of the logistic support aspects of DT&E.

### 6.3 PREFACE TO TASK TABLE

Table 6-1 lists the tasks discussed in Section 6.2, together with the corresponding data items and coordination required in the performance of the tasks. The schedule shown in the table indicates the availability dates of data items relative to major program milestones. The MP-LEM will prepare a schedule for the completion of the tasks applicable to each hardware end item, using contract award dates as the basis for assigning calendar dates to each schedule.

TABLE 6-1. MAINTENANCE PLANNING TASKS (Sheet 1 of 3)

Tasks	Applicable Data Items	Coordination	Milestone Schedule									
			RFP Release	Contract Award	SDR	PDR	CDR	FCA	T&E	Production Release		
<ol style="list-style-type: none"> <li>1. Assure implementation of an ILS program by each associate contractor and the AT&amp;SS contractor.                             <ol style="list-style-type: none"> <li>a. Ensure that each SOW, specification, and RFP contains necessary ILS information and delivery requirements.</li> <li>b. Participate in the source selection process with respect to the ILS program.</li> <li>c. Monitor contractors' ILS activities following contractor awards.</li> </ol> </li> <li>2. Assure that each associate contractor implements an LSA program.                             <ol style="list-style-type: none"> <li>a. Assure that a maintenance task analysis is accomplished for each maintenance requirement.</li> <li>b. Assure that liaison is performed among the SS-, SE-, P&amp;T-, SF-, and TD-LEMs to verify that their respective support element requirements can be adequately identified from the task analysis data.</li> <li>c. Assure that maintenance analyses performed by associate contractors are reviewed/approved.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. AFSC form 406</li> <li>2. RFP</li> <li>3. SOW</li> <li>4. Applicable DIDs</li> <li>1. In-house evaluation criteria</li> <li>2. Proposals</li> <li>3. SOW</li> <li>1. Implementation schedules</li> <li>2. SOW</li> <li>1. LSA plan</li> <li>2. ISP (L-6138/M)</li> <li>3. Maintenance concept</li> <li>1. LSA (MX4-SAMSO)</li> <li>2. LSAR (S-6171A)</li> <li>1. LSA (MX4-SAMSO)</li> </ol>	<p>Each PEO, logistic POs, applicable LEMs</p> <p>Each PEO, logistic POs</p> <p>Each PEO, logistic POs, LEMs</p> <p>Each PEO, logistic POs</p> <p>Indicated LEMs</p> <p>Each PEO, logistic POs</p>										

TABLE 6-1. MAINTENANCE PLANNING TASKS (Sheet 2 of 3)

Tasks	Applicable Data Items	Coordination	Milestone Schedule															
			RFP Release	Contract Award	SDR	PDR	CDR	FCA	T&E	Production Release								
2. (Continued)	1. LSA (MX4-SAMSO)	Each PEO		▲														
d. Assure that copies of each maintenance analysis performed by associate contractors are provided to the AT&SS contractor.																		
e. Assure that the LSAR data for each CEI is made available for all ILS activities.	1. LSAR (S-6171A)	All LEMs		▲		▲												
3. Assure that ORLAs performed by all contractors employ a standard set of criteria consistent with the system-level maintenance concept.	1. Maintenance concept 2. ORLA criteria	Each PEO, logistic POs		▲														
4. Assure that close and effective liaison is maintained with SAC, OOALC, AGMC, and other necessary agencies.		SAC, OOALC, AGMC		▲														
5. Assure that AGMC prepares a depot support concept, a depot support plan, and a maintenance plan for the MX guidance and control system.	1. Depot support concept 2. Depot support plan 3. G&C maintenance plan	AGMC																
6. Assure that OOALC prepares a depot support concept, a maintenance plan, and a support plan for the remainder of the MX Weapon System.	1. Depot support concept 2. MX maintenance plan 3. MX support plan	OOALC																
7. Support the preparation/update of logistic documentation.	1. ILSP 2. Maintenance concept 3. ITP 4. MP-LEM plan	Logistic POs, OPR for each document, applicable LEMs																

\*TBD - To be determined

TABLE 6-1. MAINTENANCE PLANNING TASKS (Sheet 3 of 3)

Tasks	Applicable Data Items	Coordination	Milestone Schedule										
			RFP Release	Contract Award	SDR	PDR	CDR	FCA	T&E	Production Release			
8. Assure that an evaluation and certification of the MX maintenance system is performed with respect to its readiness for deployment.	1. ITP 2. OT&E plan	AFTEC	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
9. Assist in defining the fault isolation and maintenance management which SAC will implement to achieve an effective missile maintenance capability by the deployed units.	1. Maintenance concept 2. MX maintenance plan 3. MX support plan	SAC, OOALC, AGMC											
10. Assure that a plan is developed for the transition of maintenance from the AT&SS contractor to SAC at IOC.	1. Maintenance transition plan	SAC											
11. Plan, supervise, coordinate and evaluate the accomplishment of the logistic support aspects of DT&E.	1. Test plans 2. Test reports	AFTEC, PEOs, all LEMs											

## APPENDIXES

<b>Appendix A: Missile-X Program Logistic Element Manager Directory . . .</b>	<b>A-1</b>
<b>Appendix B: Acronyms and Abbreviations . . . . .</b>	<b>B-1</b>
<b>Appendix C: Logistic Element Schedule for Maintenance Planning . . .</b>	<b>C-1</b>

APPENDIX A

MISSILE-X PROGRAM  
 LOGISTIC ELEMENT MANAGER DIRECTORY  
 Col. L. E. Eklund, DPML

Logistic Element	Manager	Code	Ext.	Room
Reliability Interface	Capt. T. M. Palmer	MNBR	5359	421
Maintainability Interface	Capt. A. D. Wadsworth	MNLE	4523	619
Nuclear Hardness and Survivability Interface	Capt. W. R. Jacobs	MNNH	7843	711
Maintenance Planning	Lt. Col. R. W. Ayars	MNLE	4523	619
Support Equipment	Lt. Col. B. W. Woolverton	MNNX	7005	138
Supply Support (Preoperational)	Mr. F. C. O'Connor	MNTD	6481	600
Supply Support (Operational)	Mr. J. A. Davidson	MNLM	5321	621
Transportation and Packaging	Mr. R. W. Riggs	MNTD	5474	600
Technical Data (Engineering)	Mr. L. E. Onstott	MNLM	5321	621
Technical Data (Technical Orders)	Maj. L. W. Cooper	MNTP	6684	609
Support Facilities	Mr. F. E. Longan	MNND	6891	408
Personnel and Training	Maj. L. W. Cooper	MNTP	6684	609
Logistic Support Resource Funds	Capt. H. B. Robbins	MNLA	5395	623
Logistic Support Management Information	Mr. J. L. Peterson	MNLA	5386	623

**APPENDIX B**  
**ACRONYMS AND ABBREVIATIONS**

**A&CO** — Assembly and Checkout  
**ADP** — Automatic Data Processing  
**AFALD** — Air Force Acquisition Logistics Division  
**AFLC** — Air Force Logistics Command  
**AFSC** — Air Force Systems Command  
**AFTEC** — Air Force Test and Evaluation Center  
**BTWS** — Buried Trench Weapon System  
**C/A** — Contract Award  
**CDR** — Critical Design Review  
**CDRL** — Contract Data Requirements List  
**CDRS** — Contract Data Requirements Substantiation  
**CDSR** — Cost Data Summary Report  
**CEI** — Configuration End Item  
**CFSR** — Contract Funds Status Report  
**CPR** — Cost Performance Report  
**DPML** — Deputy Program Manager for Logistics  
**DT&E** — Development Test and Evaluation  
**FCA** — Functional Configuration Audit  
**FCHR** — Functional Cost Hour Report  
**FMA** — Failure Mode Analysis  
**FSD** — Full Scale Development  
**ICBM** — Intercontinental Ballistic Missile  
**IOT&E** — Initial Operational Test and Evaluation  
**ILS** — Integrated Logistic Support  
**ILSMT** — Integrated Logistic Support Management Team  
**ILSP** — Integrated Logistic Support Plan  
**ISP** — Integrated Support Plan  
**ITP** — Integrated Test Plan  
**LEM** — Logistic Element Manager

LSA — Logistic Support Analysis  
LSAR — Logistic Support Analysis Record  
MDR — Missile Design Review  
MIC — Management Information Center  
MIS — Management Information System  
MPP — Maintainability Program Plan  
MTBF — Mean Time Between Failures  
MTTR — Mean Time to Repair  
MX — Missile-X  
OPR — Office of Primary Responsibility  
OT&E — Operational Test and Evaluation  
PCA — Physical Configuration Audit  
PDR — Preliminary Design Review  
PEO — Project Element Officer  
PMP — Program Management Plan  
PO — Project Officer  
RPP — Reliability Program Plan  
SAMSO — Space and Missile Systems Organization  
SBWS — Shelter Based Weapon System  
SDR — System Design Review  
SOW — Statement of Work  
SRA — System Requirements Analysis  
T&E — Test and Evaluation  
TI — Technical Interchange  
TPA — Test Planning Analysis

**APPENDIX C  
MAINTENANCE PLANNING ELEMENT SCHEDULE**

	Validation/ System Definition	Full-Scale Development	Production/Deployment
Major Subsystem Milestones	C/A △ P/O △ Updates △ Proposal △	SDR △ Final △ Revisions as required → Revisions as required →	Flight Tests △ MAP Tests → IOC △
1. Integrated Support Plan/ LSA Plan		PDR △ Revisions as required →	
2. ILSP			
3. SRA/LSA Evaluation		Update △	
SRA/LSA/Des. Rev. Data		Initial △	
Develop Support Reqmnts.		LSA computer summaries Initial △ Updates △ Final △	
ORLA Report			Update △
4. MAP System Maint. Plan	Preliminary △ AVE △ MAP	Plan △ Subsystem tests △	System tests: AVE, SE, Pubs., etc. →
5. ILS Verification, Demo, and Evaluation		Spare parts and maintenance support △	
6. Contractor Support IAW MIL-STD-1538		Identify △ requirements △ Identify △ requirements △	Verify capability △ Develop △ capability △ Verify △ capability △
7. Interim Support Capability			
8. Operational Support Capability			