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**MISSILE-X PROGRAM  
LOGISTIC ELEMENT MANAGEMENT PLAN  
FOR  
PERSONNEL AND TRAINING LEM**

22 August 1977

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MAR 29 1978  
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Prepared for  
**DEPARTMENT OF THE AIR FORCE  
SPACE AND MISSILE SYSTEMS ORGANIZATION (AFSC)  
ICBM Program Office**

Under Contract F04606-76-A-0087-R901

**DISTRIBUTION STATEMENT A**  
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Publication W77-1953-TN10

**ARINC** RESEARCH CORPORATION  
P.O. Box 1375/Santa Ana, Calif.

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MISSILE-X PROGRAM  
LOGISTIC ELEMENT MANAGEMENT PLAN  
FOR  
PERSONNEL AND TRAINING 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

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Prepared by  
A. N. Winter  
A. J. Fremer

 **ARINC** RESEARCH CORPORATION

CORPORATE HEADQUARTERS  
2551 Riva Road  
Annapolis, MD 21401

SANTA ANA BRANCH  
1222 E. Normandy Place  
Santa Ana, CA 92702

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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  
PERSONNEL AND TRAINING LEM

22 August 1977



Approved \_\_\_\_\_  
Lester E. Eklund, Colonel, USAF  
Director, Logistics  
Deputy for Intercontinental Ballistic Missiles

Date \_\_\_\_\_

Approved \_\_\_\_\_  
Winston D. Patterson, Colonel, USAF  
Director, Deployment  
Deputy for Intercontinental Ballistic Missiles

Date \_\_\_\_\_

Approved \_\_\_\_\_  
Aloysius G. Casey, Colonel, USAF  
Assistant Deputy, Missile-X

Date \_\_\_\_\_

## FOREWORD

This Personnel and Training 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 Personnel and Training (P&T-LEM). It has been written to assist the P&T-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 P&T-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 Personnel and Training element. It has been written to provide the P&T-LEM with guidance in managing the Personnel and Training element and ensuring that personnel and training products are provided in a timely and cost-effective manner. 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.

2  
SCOPE

This Logistic Element Management Plan structures the personnel and training logistic requirements of the ILSP into identifiable responsibilities of the P&T-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 P&T-LEM within that program.
- c. Describes the participation of the P&T-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 P&T-LEM with the remaining logistic elements.

## REFERENCE DOCUMENTS

The following documents listing is provided as a reference source relating to the implementation of an ILS program and the Personnel and Training 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 50-8	Instructional Systems Development, 7 January 1977
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
AFR 800-15	Human Factors Engineering and Management, 1 October 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 Standard 77-1	Human Factors Engineering Specification
SAMSO/MNL Publication	ILS Management Information System Report, 31 August 1977
AFSC Supplement 1 to AFR 800-15	Human Factors Engineering and Management, 4 June 1977

## 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 with 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 AFCLC 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.

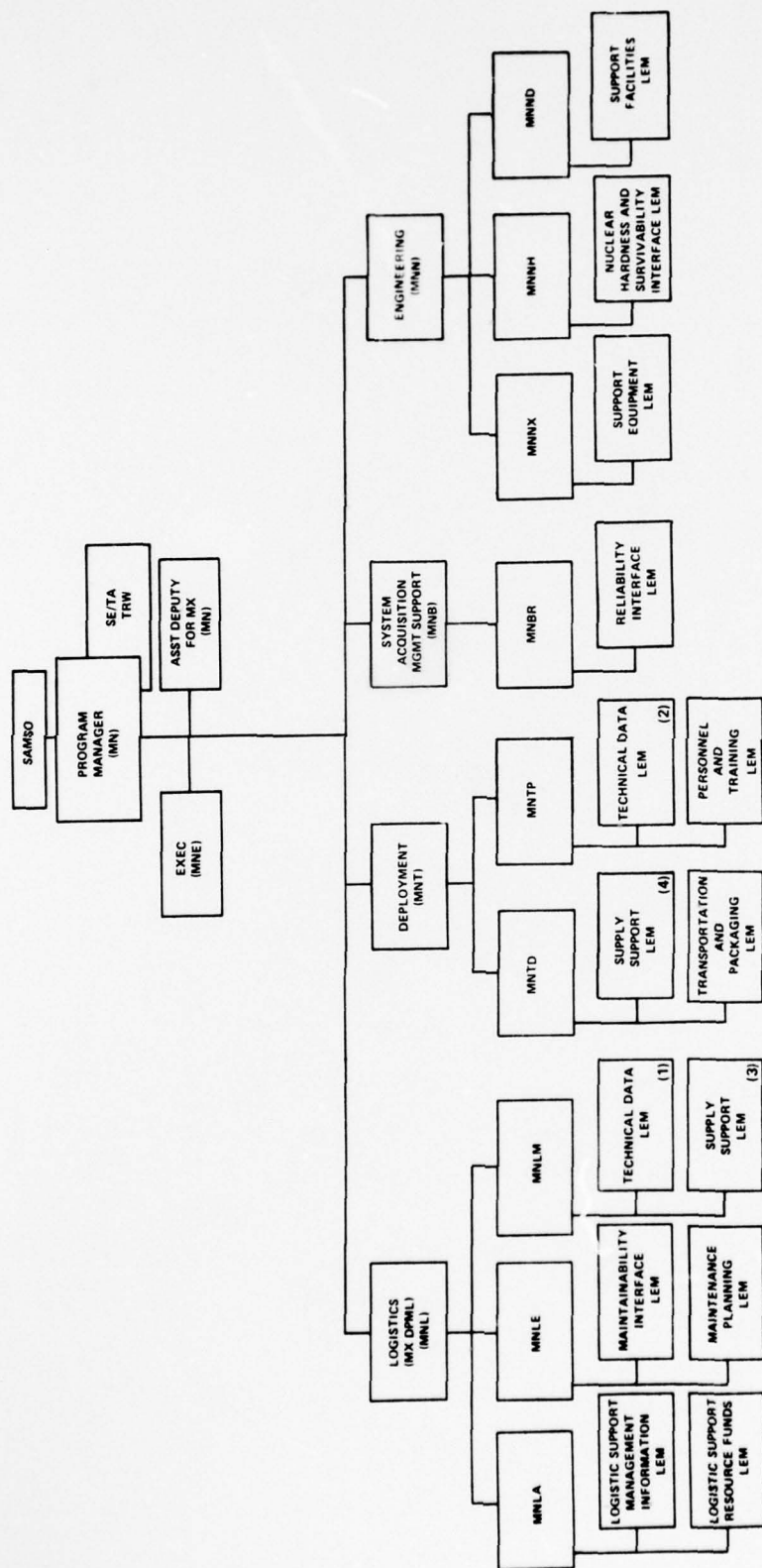
The DPML will draw upon the support of the designated logistic element managers to obtain timely contributions to those system design and support decisions which affect logistic support costs and effectiveness throughout the life of the system.

#### 4.1.2 Logistic Element Managers

As discussed in paragraph 4, the Program Office operates with 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 P&T-LEM supports system 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) Preoperational

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 by the LEM within his logistic element to maintain cognizance of the activities that impact on logistics.

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 31 August 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 P&T-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.

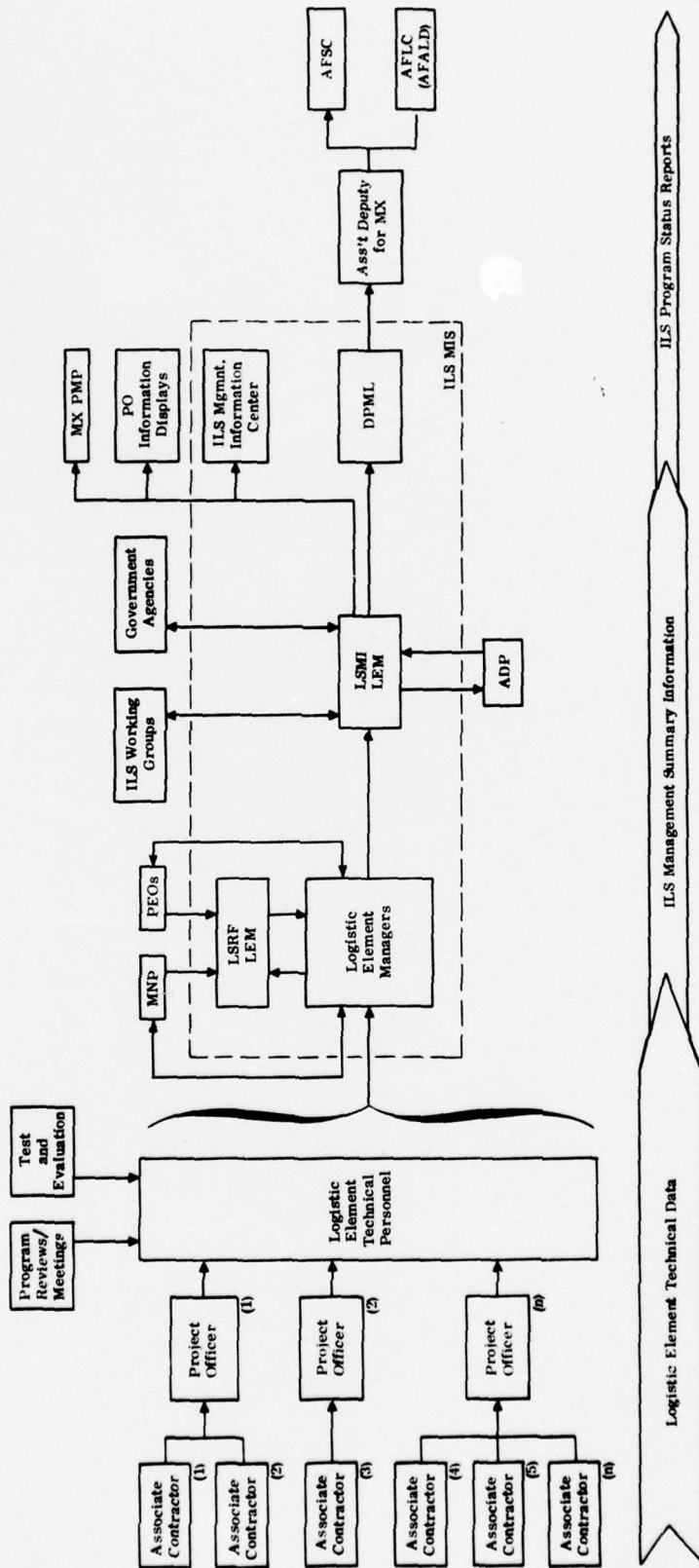


Figure 4-2. Information Flow of the ILS MIS



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.

5  
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.

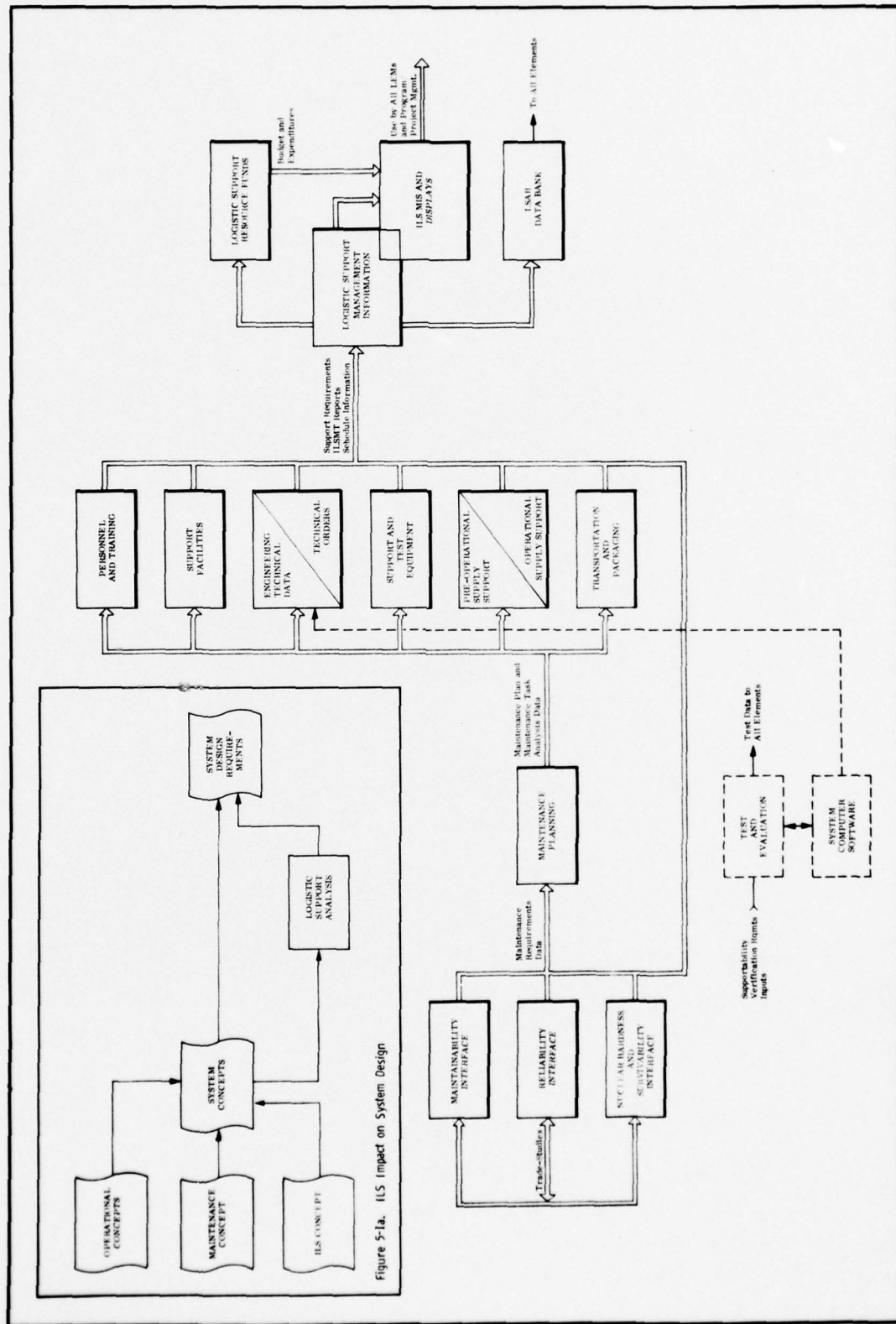


Figure 5-1. Primary Interface Relationships of Logistic Elements

## 5.2 PERSONNEL AND TRAINING LOGISTIC ELEMENT

Personnel and Training encompasses those activities implemented to assure that adequate numbers of trained personnel are available to safely and effectively operate, maintain, and control the MX Weapon System in its operational environment. As a logistic element, P&T comprises those efforts required to assure that the impact of personnel and training on the ILS program is identified, evaluated, and documented. The results of these efforts are then utilized as feedback to the system design process. The task analysis data resulting from the SRA/LSA efforts provide the primary source of information for this logistic element.

The P&T element interfaces with the Maintenance Planning element on assurance efforts pertaining to task analyses and their comprehensiveness for defining qualitative and quantitative personnel requirements. Interfaces occur with the Technical Data and Support and Test Equipment elements with respect to assurance that technical data is appropriate for the indicated skill levels, and that support and test equipment is compatible with the human factors engineering aspects and indicated skill levels of the operational and maintenance personnel.

The P&T element interfaces with the ATC and SAC with respect to assuring that they are provided the necessary information to identify training and training equipment requirements.

## P&T-LEM MANAGEMENT RESPONSIBILITIES AND TASKS

### 6.1 RESPONSIBILITIES

The Personnel and Training LEM assists the Deputy Program Manager for Logistics in assuring that the quantitative and qualitative personnel requirements are identified. These responsibilities entail:

- a. Coordinating the P&T element of logistics for the MX Program
- b. Serving as the P&T logistic point of contact for SRA/LSA activities
- c. Establishing lines of communication with each PEO and providing assistance in all matters pertaining to the logistic support aspects of P&T
- d. Providing P&T data input to the ILS Management Information System through close liaison with the LSMI-LEM
- e. Assuring the tests and demonstrations have verified the achievement of training objectives.

### 6.2 MANAGEMENT TASKS

The scope of each task identified in this plan must be tailored by the P&T-LEM for each specific procurement. Consequently, the applicable data items and the degree of coordination activities will vary with the scope of the task.

While the tasks identified below are intended to be comprehensive relative to the scope of the P&T-LEM's responsibilities, additional tasks may become apparent during the implementation of this plan. The LEM is responsible for assuring that these new tasks are planned and scheduled for each applicable procurement. The new tasks should be documented, this plan updated as applicable, and the appropriate information provided to the LSMI-LEM for updating the MIS and its 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, expected coordination required for the tasks, and a schedule relating tasks to major program events.

In the performance of his assurance functions the P&T-LEM will coordinate, as necessary, with other LEMs, PEOs, OPRs, and human factors engineering. 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, the initiation of problem/impact statements, the development of schedule information for the MIS, and the resolution of assigned action items.

- Task 1

Assure that appropriately tailored P&T activities are incorporated in each hardware procurement contract for the MX Weapon System. Initiate this task prior to RFP release by assuring the preparation of CDRS Form 40s and tailoring of the applicable data item description to the needs of the specific hardware being procured. Coordinate this activity with human factors engineering personnel and the designated PEOs for hardware procurements. Following contract award, review and evaluate the draft of the contractor-prepared Human Factors Development Plan (HFDP) and verify its adequacy of scope and adherence to applicable compliance documentation. Coordinate with the PEO and human factors engineering program office personnel on monitoring the implementation of the HFDP.

- Task 2

Assure that the personnel, skill, and training requirements of each hardware/software CEI are identified and evaluated in perspective with the overall MX Weapon System and integrated into system level requirements. Coordinate with hardware/software PEOs and the applicable engineering groups within the Program Office directly responsible for system integration.

- Task 3

Assure that the review, evaluation, and approval cycle of contractor-submitted LSAR data sheets pertaining to personnel and training requirements is performed. Assure that the task analysis data recorded on LSAR data sheet D are adequate for the

development of formal personnel and training requirements documentation. Coordinate these efforts with the PEOs and HFE personnel.

● Task 4

Assure that the tradeoff studies of the system design process include consideration of human factors (e.g., human engineering design criteria). Coordinate with HFE personnel in the review and evaluation of the contractor-developed Human Factors Development Plan, the Human Engineering Design Approach Document, and Configuration Item Development Specification in context with tradeoffs involving changes in personnel, skill, or training requirements. Assure that such tradeoffs consider the effects on life cycle costs. Coordinate this latter effort with the LCC/DTC Manager to identify changes in P&T cost factors within the LCC/DTC model.

● Task 5

Assure that the system test efforts include an evaluation of personnel and training. Coordinate with system test and logistic technical personnel in the development of the Integrated Test Plan (ITP) and assure that the ITP adequately covers requirements for P&T. Assure that test plans are complete and adequate for assessing personnel planning information, job performance aids, and adequacy of training. Support AFTEC, as required, during DT&E and OT&E in all matters pertaining to the evaluation of personnel, training, and human factors engineering.

● Task 6

Assure that P&T program milestones are met. Coordinate with the PEO of each hardware associate contractor to develop milestones based on the major program events as depicted in Table 6-1. Track the implementation of P&T and HFE activities, and provide schedule status information to the LSMI-LEM for updating the ILS Management Information System.

● Task 7

Assure that priorities are assigned to early production units of operational equipments and support items so that due consideration is given to their assignment to training commands for training purposes.

- Task 8

Assure that SAC and ATC are supported in the evaluation of personnel availability. Evaluate personnel requirements with respect to available skills and specialties, and the training needs based on new skill requirements. Provide planning data for updating manpower acquisition plans based on new requirements. Coordinate with the PEO and MP-LEM in reviewing maintenance task analyses to identify new personnel requirements.

- Task 9

Support the preparation and updating of logistic documentation. Review/develop/update as appropriate the 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 P&T-LEM will develop the logistic-related personnel and training 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.

### 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 P&T-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. PERSONNEL AND TRAINING LEM TASKS (Sheet 1 of 4)

		Milestone Schedule									
		RFP Release	Contract Award	SDR	PDR	CDR	FCA	T&E	Production Release		
1.	Assure that appropriately tailored P&T activity is incorporated in each hardware procurement action for the MX Weapon System.										
	a. Assure that a CDRS is prepared for the HFDP and that the applicable data item description (DID) has been tailored in scope to suit the particular hardware.	△									
	b. Assure that the draft HFDP is evaluated for scope and compliance with the requirements of the CDRL and SOW.										
	c. Assure that the implementation of associate contractors HFDP is monitored.										
2.	Assure that the data required by ATC and SAC to delineate training and training equipment requirements are provided.										
	a. Assure the integration of associate-contractor P&T efforts to definitize overall system level requirements.										
	b. Assure that manpower and personnel requirements are identified.										

CA 60D

CA 60D

CA 120D

Quarterly thereafter

30D SDR

30D PDR

30D PDR

As submitted

30D CDR

90 days after notice by SAMSO

30D PDR

30D CDR

TABLE 6-1. PERSONNEL AND TRAINING LEM TASKS (Sheet 2 of 4)

Tasks	Applicable Data Items	Coordination	Milestone Schedule
2. (Continued) c. Assure that a System Trained Personnel Requirements (System TPR) document is developed/maintained. d. Assure that a System Training Plan is initiated and updated, then refined and definitized periodically until this responsibility is transferred to the supporting command. e. Assure that the impact of ECPs on training req'ts is identified.	1) TPR Data Item Description (for System Level) 2) QQPRI (DI-H-3253) 3) LSAR data sheet D Training planning information (DI-H-3265)	PEOs, HF engineering, SAC, AIC { PEO, HF engineering, MP-LEM PEO HF engineering, PEO	
3. Assure that the review, evaluation and approval cycle of contractor submitted LSAR data is performed a. Assure that personnel skills, training, training equipment, and training facilities requirements are or can be adequately identified from the raw data. b. Assure that LSAR data are valid, complete, and adequate for the development of formal personnel and training requirements documentation.	SRA data forms B LSAR data sheets C, D LSAR data sheets C, D	MP-LEM, PEO PEO	
4. Assure that trade studies include human factors considerations, human engineering design criteria, and life-cycle costs as an integral part of the design process.	Trade study reports (DI-S-3606/M)	HF engineering, M-, NH&S-, MP-LEMs, LCC/DTC Manager	

TABLE 6-1. PERSONNEL AND TRAINING LEM TASKS (Sheet 3 of 4)

Tasks	Applicable Data Items	Coordination	Milestone Schedule									
			RFP Release	Contract Award	SDR	PDR	CDR	FCA	T&E	Production Release		
<p>3. Assure that the system test efforts include an evaluation of P&amp;T.</p> <p>a. Assure that test plans include procedures for evaluating the appropriateness, completeness and adequacy of personnel planning information.</p> <p>b. Assure that job performance aids are effective and adequate.</p> <p>c. Assure that training and training equipment requirements have been satisfied and that training is effective and adequate.</p>	<p>1) SAMSO ED-77-3, Integrated Test Plan</p> <p>2) Test Planning Analysis Functional Analysis Form, form B</p> <p>3) HFTE detailed test plans (DI-T-3707)</p> <p>HFTE Plans</p> <p>HFTE Plans</p>	<p>Test &amp; Evaluation Logistic Representative HF engineering, PEO</p> <p>HF engineering</p> <p>HF engineering, Test &amp; Evaluation Logistic Representative</p>	△		△	△	△					
<p>d. Support AFTEC, as required, during DT&amp;E and OT&amp;E.</p> <p>6. Assure that P&amp;T program milestones are met.</p>	<p>HFTE Plans</p> <p>HFDP</p>	<p>AFTEC, HF engineering, T&amp;E Log. Rep. PEO, HF engineering</p>		CA 60D △								
<p>7. Assure that priorities for early production units of operational equipments and support items for training purposes are identified.</p> <p>8. Assure that SAC and ATC are supported in the evaluation of personnel availability.</p> <p>a. Assure that personnel requirements with respect to available skills and specialties are evaluated.</p>	<p>Training planning information (DI-H-3265)</p> <p>1) Qualitative and Quantitative Personnel Requirements Information (SQPRI)</p> <p>2) LSA summary reports</p>	<p>ILSMT Program Office</p> <p>HF engineering, PEOs</p>				△						

TABLE 6-1. PERSONNEL AND TRAINING LEM TASKS (Sheet 4 of 4)

		Milestone Schedule										
		RFP Release	Contract Award	SDR	PDR	CDR	FCA	T&E	Production Release			
8. (Continued) b. Assure that training needs are evaluated based on new skill requirements. c. Assure that manpower acquisition plans are updated based on new requirements.	TPI  QPPI LSA summary reports											
		Coordination  HF engineering PEOs  MNILM MNILA										
9. Support the preparation and updating of logistic management documentation.	1) ILSP 2) Maintenance Plan 3) ITP 4) P&T-LEM Plan											

## APPENDIXES

Appendix A: Missile-X Program Logistic Element Manager Directory . . .	A-1
Appendix B: Acronyms and Abbreviations . . . . .	B-1
Appendix C: Logistic Element Schedule for Personnel and Training . . .	C-1

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  
LOGISTIC ELEMENT SCHEDULE FOR PERSONNEL AND TRAINING

	Validation/ System Definition	Full Scale Development	Production/Deployment
Major Subsystem Milestones	C/A MDR △ △	SDR △	IOC △
Training	P/O Proposal △	PDR △	
1. TPI	P/O Prop. △ Approved (Quarterly)	CDR △ FCA △ Flight Tests △△△ MAP Tests →	
2. HF Development Plan	△ (Quarterly)		
3. HFDP Progress Report	△ (Quarterly)		
4. HF Board Meetings			
5. Human Engrg. Design Approach Document		Initial △ Update △ Update △	
6. Tng. Reqmnts. Develop.		← LSA data reviews → △ Draft △ Approved △	
7. QQPRI		Plan △ Report △	Type 2 tng. △
8. HF Test and Evaluation		SAC test & OT&E tng. △	SAC I&CO tng. △
9. Tng. Course Development			
Trainers			
1. Tnr. Reqmnts. Develop.		LSA data reviews △ △ Initial △ Update △	
2. TEPI*		Submit Specification △ Approve △ C/A △ SDR △ IDR △	Production △ Initial development △ Update △
3. Trainer Development			Accept. Demo. △ I&CO △ Verif. △
ORT & Indiv. Maint. Tnrs.			
4. Trainer Manuals			
*Final update CDR90D (MGE)			

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