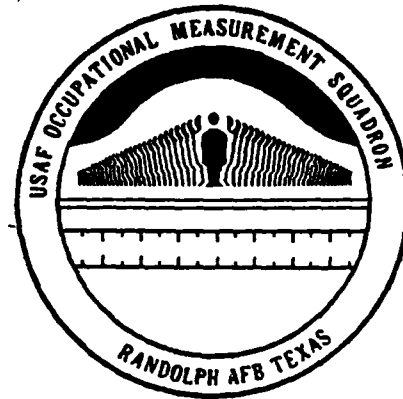


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**UNITED STATES  
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**OCCUPATIONAL  
SURVEY REPORT**

**MISSILE SYSTEMS MAINTENANCE**

**AFSC 411XOA**

**AFPT 90-411-947**

**OCTOBER 1992**

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**OCCUPATIONAL ANALYSIS PROGRAM  
USAF OCCUPATIONAL MEASUREMENT SQUADRON  
AIR TRAINING COMMAND  
RANDOLPH AFB, TEXAS 78150-5000**

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## TABLE OF CONTENTS

	<u>PAGE NUMBER</u>
PREFACE . . . . .	iv
SUMMARY OF RESULTS . . . . .	v-vi
INTRODUCTION . . . . .	1
Background . . . . .	1
SURVEY METHODOLOGY . . . . .	2
Inventory Development . . . . .	2
Survey Administration . . . . .	3
Survey Sample . . . . .	3
Task Factor Administration . . . . .	3
SPECIALTY JOBS (Career Ladder Structure). . . . .	5
Overview of Specialty Jobs . . . . .	6
Group Descriptions . . . . .	11
Comparison of Current Group Descriptions To Previous Study . . .	23
ANALYSIS OF DAFSC GROUPS . . . . .	23
Skill-Level Descriptions . . . . .	23
Summary . . . . .	28
ANALYSIS OF AFR 39-1 SPECIALTY DESCRIPTIONS . . . . .	28
TRAINING ANALYSIS . . . . .	34
First-Enlistment Personnel . . . . .	34
TE and TD Data . . . . .	34
STS . . . . .	39
POI . . . . .	43
JOB SATISFACTION ANALYSIS . . . . .	46
IMPLICATIONS . . . . .	51
APPENDIX A - SELECTED REPRESENTATIVE TASKS PERFORMED BY MEMBERS OF CAREER LADDER JOBS . . . . .	56

TABLES AND FIGURES

	<u>PAGE NUMBER</u>
TABLE 1 - MAJCOM REPRESENTATION IN SAMPLE . . . . .	4
TABLE 2 - PAYGRADE DISTRIBUTION OF SAMPLE . . . . .	4
FIGURE 1 - 411XOA CAREER LADDER JOBS . . . . .	7
TABLE 3 - AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS.	8-10
TABLE 4 - SELECTED BACKGROUND DATA FOR 411XOA CAREER LADDER JOBS. . .	12-14
TABLE 5 - SPECIALTY JOB COMPARISONS BETWEEN CURRENT, 1985, AND 1986 SURVEYS . . . . .	24-25
TABLE 6 - DISTRIBUTION OF SKILL-LEVEL MEMBERS ACROSS CAREER LADDER JOBS (PERCENT)** . . . . .	26
TABLE 7 - TIME SPENT ON DUTIES BY MEMBERS OF SKILL-LEVEL GROUPS (RELATIVE PERCENT OF JOB TIME)** . . . . .	27
TABLE 8 - REPRESENTATIVE TASKS PERFORMED BY 41130A PERSONNEL . . . . .	29
TABLE 9 - REPRESENTATIVE TASKS PERFORMED BY 41150A PERSONNEL. . . . .	30
TABLE 10 - TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 41130A AND 41150A PERSONNEL (PERCENT MEMBERS PERFORMING) . . . . .	31
TABLE 11 - REPRESENTATIVE TASKS PERFORMED BY 41170A PERSONNEL . . . . .	32
TABLE 12 - TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 41150A AND DAFSC 41170A PERSONNEL (PERCENT MEMBERS PERFORMING) . . . . .	33
TABLE 13 - RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY FIRST ENLISTMENT AFSC 411XOA PERSONNEL** . . . . .	35
TABLE 14 - REPRESENTATIVE TASKS PERFORMED BY FIRST-ENLISTMENT 411XOA PERSONNEL . . . . .	36
TABLE 15 - EQUIPMENT ITEMS USED BY MORE THAN 30 PERCENT OF FIRST JOB OR FIRST-ENLISTMENT AFSC 411XOA PERSONNEL . . . . .	37
FIGURE 2 - FIRST-ENLISTMENT PERSONNEL JOBS . . . . .	38
TABLE 16 - TASKS WITH HIGHEST TRAINING EMPHASIS RATINGS . . . . .	40
TABLE 17 - SAMPLE OF TASKS WITH HIGHEST TASKS DIFFICULTY RATINGS . . .	41-42
TABLE 18 - EXAMPLES OF STS ITEMS NOT SUPPORTED BY OSR DATA . . . . .	44
TABLE 19 - EXAMPLES OF TECHNICAL TASKS PERFORMED BY 20 PERCENT OR MORE 411XOA GROUP MEMBERS AND NOT REFERENCED TO THE STS . . . . .	45
TABLE 20 - EXAMPLES OF POI OBJECTIVES NOT SUPPORTED BY OSR DATA. . . .	47-48
TABLE 21 - EXAMPLES OF TECHNICAL TASKS PERFORMED BY 30 PERCENT OR MORE 411XOA FIRST-ENLISTMENT PERSONNEL AND NOT REFERENCED TO THE POI . . . . .	49
TABLE 22 - COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 411XOA TAFMS GROUPS IN CURRENT STUDY TO A COMPARATIVE SAMPLE (PERCENT MEMBERS RESPONDING) . . . . .	50
TABLE 23 - COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 411XOA TAFMS GROUPS IN CURRENT STUDY TO PREVIOUS STUDY (PERCENT MEMBERS RESPONDING) . . . . .	52
TABLE 24 - JOB SATISFACTION INDICATORS FOR AFSC 411XOA JOBS (PERCENT MEMBERS RESPONDING)* . . . . .	53-55

## PREFACE

This report presents the results of an Air Force (AF) Occupational Survey of the Missile Systems Maintenance career ladder (Air Force Specialty Code (AFSC) 411X0A). Authority for conducting occupational surveys is contained in AF Regulation (AFR) 35-2. Computer products used in this report are available for use by operations and training officials.

Mr Tom Duffy, Inventory Development Specialist, developed the survey instrument; Second Lieutenant John C. Martinez, Occupational Analyst, analyzed the data and wrote the final report. Mr Wayne Fruge provided computer programming support, and Ms Tamme Lambert provided administrative support. Major Randall C. Agee, Deputy Chief, Airman Analysis Section, Occupational Analysis Flight, United States Air Force (USAF) Occupational Measurement Squadron (USAFOMS), reviewed and approved this report for release.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to the USAFOMS, Attention: Chief, Occupational Analysis Flight (OMY), Randolph AFB, Texas 78150-5000 (Defense Switched Network 487-6623).

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## SUMMARY OF RESULTS

1. Survey Coverage: The Missile Systems Maintenance (AFSC 411XOA) career ladder was surveyed to obtain current task and equipment data for use in examining current training programs. Survey results are based on 618 responses from AFSC 411XOA personnel, which constitute 63 percent of the assigned population. Personnel in the Superintendent and Chief Enlisted Manager (CEM) levels were not surveyed.

2. Specialty Jobs: Structure analysis identified 4 job clusters and 13 independent job types. Personnel in the Electromechanical Team cluster comprise 34 percent of the sample and perform a wide variety of technical tasks related to launch facility maintenance, launch control facility maintenance, and general missile maintenance and shop functions. Members of the Electronic Laboratory cluster (9 percent of sample) reported performing tasks related to laboratory checkouts and inspections of WS-133 systems and equipment. Respondents grouped in the Supervisory cluster (16 percent of sample) perform primarily supervisory and administrative functions. Personnel in the Expanded Maintenance Data Analysis System (EMDAS) cluster constitute 3 percent of the survey sample and report performing tasks related to maintenance data functions. The 13 remaining jobs, which comprise 17 percent of the sample, cover a wide variety of functions and responsibilities, ranging from junior airmen in Equipment Control to senior noncommissioned officers (NCOs) in Missile Launch Analyst positions.

3. Career Ladder Progression: Personnel in the Missile Systems Maintenance career ladder show a typical pattern of career ladder progression. Three-skill level personnel perform essentially technical tasks. At the 5-skill level, a moderate shift towards supervisory functions occurs, with members still spending more than half of their job time performing technical duties. Seven-skill level personnel spend the majority of their duty time performing managerial and supervisory functions, with a smaller percentage of time dedicated to technical duties. Specialty descriptions in AFR 39-1 provide a broad and accurate overview of tasks and duties performed within the career ladder.

4. Training Analysis: A match of survey data to the AFSC 411XOA Specialty Training Standard (STS) identified 175 line items on the STS not supported by survey data. A similar match of data to the Plan of Instruction (POI) for the C3ABR41130A-002 course revealed that 35 POI learning objectives are not supported. Career ladder functional managers and training personnel should carefully review these unsupported STS and POI items to justify their continued inclusion in the training documents.

5. Job Satisfaction Analysis: Overall, AFSC 411X0A respondents are generally satisfied with their jobs. When compared to other direct support personnel surveyed in 1991, AFSC 411X0A personnel show relatively higher job satisfaction. When compared to the 1985 (316X0G) and 1986 (316X2G) Occupational Survey Reports (OSRs) (which merged to form the current AFSC 411X0A career ladder), survey data indicate an overall increase in job satisfaction among AFSC 411X0A career ladder respondents. A comparison between major jobs identified in the current sample reveals that members in the Trainer Maintenance and Instructor groups have the highest level of job satisfaction, while personnel in the Technical Order Librarian group are the least satisfied.

6. Implications: The AFSC 411X0A career ladder structure identified in this report is similar to that found in the previous 1985 (316X0G) and 1986 (316X2G) OSRs. The AFR 39-1 job descriptions accurately describe the jobs and tasks performed by personnel at all skill levels, and overall satisfaction was positive for the jobs identified. Analysis of the training documents indicates that both the STS and POI contain a number of unsupported areas which should be reviewed to determine if inclusion in future revisions of these documents is warranted.

OCCUPATIONAL SURVEY REPORT  
MISSILE SYSTEMS MAINTENANCE CAREER LADDER  
(AFSC 411X0A)

INTRODUCTION

This is a report of an occupational survey of the Missile System Maintenance career ladder conducted by the Occupational Analysis Flight, USAFOMS. The 3330th Technical Training Wing/Operations Division (TTOM) at Chanute AFB IL requested this survey to evaluate the effectiveness of technical training for Intercontinental Ballistic Missile (ICBM) organizational and intermediate level maintenance technicians since the merger of AFSCs 316X0G (Missile Systems Analyst career ladder) and 316X2G (Missile Electronic Equipment career ladder) in April 1985. The last surveys pertaining to this career ladder were published in July 1985 (316X0G) and March 1986 (316X2G).

The U.S. initiative which took 450 Minuteman II ICBMs off alert in September 1991 was a factor taken into consideration in preparing this OSR. This action did not adversely affect the validity or reliability of the data with regard to the current status of the career ladder. This issue will be addressed later in the report.

Background

As described in the AFR 39-1 Specialty Descriptions for AFSC 41110/30/50, 3- and 5-skill level members are responsible for monitoring and operating consoles, fault display panels, and checkout equipment; performing organizational and field maintenance on missile guidance and control systems and electronic test, launch control, checkout, and ground equipment; analyzing malfunctions of missile systems, subsystems, and related checkout and operating equipment; performing organizational maintenance on launch site electronic equipment; and coordinating site maintenance activities.

In addition, 7-skill level members are also responsible for advising on problems in repairing, overhauling, modifying, and installing missile guidance and control systems; and performing missile systems maintenance.

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Initial 3-skill level training for AFSC 411X0A personnel is provided through an 18-week course at Chanute AFB IL. The Apprentice Missile Systems Maintenance Specialist (ICBM) course, C3ABR41130A002, covers: the operation, inspection, checkout, and periodic maintenance of WS-133 and WS-118 systems including launch facility, launch control facility, support base, and aerospace ground equipment; electronic fundamentals; assembly and installation of components; use of standard and special test equipment; and technical orders, inspection and maintenance records, manuals, directives, and other maintenance publications.

Entry into the career ladder currently requires an Armed Forces Vocational Aptitude Battery (ASVAB) Electrical score of 67, an x factor of K (70 lbs), screening for physical and/or psychological limitations that would prevent working in enclosed or high places, and reliability screening in accordance with AFR 35-99.

## SURVEY METHODOLOGY

### Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI) Air Force Personnel Test 90-411-947, dated August 1991. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, and tasks from the last AFSC 316X0G and AFSC 316X2G OSRs. The preliminary task list was refined and validated through personal interviews with 54 subject-matter experts (SMEs) representing 2 major commands (MAJCOMs) at the following locations:

<u>BASE</u>	<u>REASON FOR VISIT</u>
Chanute AFB IL	ATC Technical Training School
FE Warren AFB WY	WS-133A-M/CDB (Minuteman III) and WS-118 (Peacekeeper)
Malmstrom AFB MT	WS-133A-M/CDB (Minuteman II) and WS-133B/CDB (Minuteman III)
Ellsworth AFB SD	WS-133A-M (Old Minuteman II)
Vandenberg AFB CA	Launch Test Facility Maintenance

The resulting JI contained a comprehensive listing of 982 tasks grouped under 21 duty headings. A background section requested information such as grade, job title, time in present job, time in service, job satisfaction, and equipment maintained in performance of the incumbent's job.

### Survey Administration

From April through August 1991, Military Personnel Flights (formerly consolidated base personnel offices (CBPOs) at operational bases nationwide administered the inventory to all eligible DAFSC 411XOA personnel. Members eligible for the survey consisted of the total assigned 3-, 5-, and 7-skill level population, excluding the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring during the time inventories were administered to the field; and (4) personnel in their jobs less than 6 weeks. Participants were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Human Resources Directorate, Armstrong Laboratory.

Each individual who completed the inventory first filled in an identification and biographical information section and then checked each task performed in their current job. After checking all tasks performed, each individual rated each task on a 9-point scale showing relative time spent on that task as compared to all other tasks checked. The ratings ranged from one (very small amount time spent) through five (about average time spent) to nine (very large amount spent).

To determine relative time spent for each task checked by a respondent, all of the incumbent's ratings are assumed to account for 100 percent of that member's time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time for each task. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percentage of time spent.

### Survey Sample

Personnel were selected to participate in this survey to ensure an accurate representation across major commands and paygrades. Table 1 reflects the distribution percentages, by MAJCOM, of assigned AFSC 411XOA personnel, as of April 1991. The 618 respondents in the final sample represent 63 percent of all assigned AFSC 411XOA personnel. Table 2 reflects the distribution percentages by paygrade groups. As shown by both tables, the survey sample accurately reflects the overall AFSC 411XOA population.

### Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 411XOA personnel (generally E-6 or E-7 technicians) also completed a second booklet for either training emphasis (TE) or task difficulty (TD). These booklets were processed separately from the job inventories. This information is used in a number of different analyses discussed in more detail within this report.

TABLE 1  
MAJCOM REPRESENTATION IN SAMPLE

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
SAC	88	94
ATC	11	5
AFLC	*	*
AFSPACECOM	*	0
TOTAL ASSIGNED = 988		
TOTAL SURVEYED = 852		
TOTAL IN SAMPLE = 618		
PERCENT OF ASSIGNED IN SAMPLE = 63%		
PERCENT OF SURVEYED IN SAMPLE = 72%		

\* Denotes less than 1 percent

TABLE 2  
PAYGRADE DISTRIBUTION OF SAMPLE

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
E-1 to E-3	19	11
E-4	31	32
E-5	25	28
E-6	14	17
E-7	10	11
E-8	*	*

\* Denotes less than 1 percent

TD. Each individual completing a TD booklet was asked to rate the relative difficulty of all inventory tasks on a 9-point scale (from extremely low to extremely high). Difficulty is defined as the length of time required by the average incumbent to learn to do the task. TD data were independently collected from 72 experienced 7-skill level personnel stationed worldwide. Interrater reliability was calculated and found acceptable. Ratings were standardized so tasks have an average difficulty rating of 5.00, with a standard deviation of 1.00.

TE. Individuals completing TE booklets were asked to rate tasks on a 10-point scale from no training required to an extremely high amount of TE. TE is a rating of which tasks require emphasis in structured training for first-term personnel. Structured training is defined as training provided at resident technical schools, field training detachments (FTD), mobile training teams (MTT), formal on the job training (OJT), or any other organized training method. TE data were collected independently from 48 experienced 7-skill level personnel stationed worldwide. As with TD ratings, the interrater reliability was also acceptable. In this specialty, tasks rated high in TE have ratings of 3.52 and above, with an average rating of 1.86. As was discussed in the TD section above, TE data may also be used to rank order tasks, indicating those tasks which senior NCOs in the field consider the most important for first-term airmen to be trained to perform.

When used in conjunction with the primary criterion of percent members performing, TD and TE ratings can provide insight into first-term personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction supporting AFS entry-level jobs.

#### SPECIALTY JOBS (Career Ladder Structure)

Each USAF Occupational Analysis begins with an examination of the career ladder structure. The structure of jobs within the Missile Systems Maintenance career ladder was examined on the basis of similarity of tasks performed and the percent of time spent provided by job incumbents, independent of other specialty background factors.

Each individual in the sample performs a set of tasks called a job. An automated job clustering program organizes individual jobs into similar units of work. This hierarchical grouping program is a basic part of the Comprehensive Occupational Data Analysis Program (CODAP) system for job analysis. Each individual job description (all the tasks performed by that individual and the relative amount of time spent on those tasks) in the sample is compared to every other job description in the sample. The automated system locates the two job descriptions with the most similar tasks and percent time ratings and combines them to form a group job description. In successive stages, the system adds new members to initial groups, or forms new groups based on the similarity of tasks performed and similar time ratings in the individual job descriptions.

The basic identifying group used in the hierarchical job structuring process is the Job Type. When there is a substantial degree of similarity between Job Types, they are grouped together and identified as a Cluster. A specialized job type too dissimilar to fit within a cluster is labeled an Independent Job Type (IJT). The job structure resulting from this grouping process (the various jobs within the career ladder) can be used to evaluate the accuracy of career ladder documents (AFR 39-1 Specialty Descriptions and STSs) and to gain a better understanding of current utilization patterns. The above terminology will be used in the discussion of the AFSC 411XOA career ladder structure.

### Overview of Specialty Jobs

Based on the similarity of tasks performed and the amount of time spent performing each task, 4 clusters and 13 IJTs were identified within the survey sample. Figure 1 illustrates the division of jobs performed by AFSC 411XOA personnel. A listing of these jobs is provided below. Table 3 presents the relative time spent by respondents in each duty for each job. The stage (STG) number shown beside each title references computer printed information; the letter ("N") stands for the number of personnel in each group.

- I. ELECTROMECHANICAL TEAM (EMT) CLUSTER (STG119, N=212)
- II. ELECTRONIC LABORATORY (E-LAB) CLUSTER (STG154, N=53)
- III. SUPERVISORY CLUSTER (STG054, N=99)
- IV. JOB CONTROL IJT (STG113, N=25)
- V. EXPANDED MAINTENANCE DATA ANALYSIS SYSTEM (EMDAS)  
COMPUTER OPERATION CLUSTER (STG141, N=18)
- VI. MAINTENANCE PLANNING-SCHEDULING IJT (STG136, N=10)
- VII. QUALITY ASSURANCE (QA) INSPECTION-EVALUATION  
IJT (STG151, N=15)
- VIII. EQUIPMENT CONTROL IJT (STG126, N=7)
- IX. BRIEFING IJT (STG116, N=8)
- X. TRAINER MAINTENANCE IJT (STG170, N=6)
- XI. INSTRUCTIONAL SYSTEMS DESIGN (ISD) IJT (STG111, N=6)
- XII. TECHNICAL COURSE INSTRUCTION IJT (STG092, N=6)
- XIII. TECHNICAL ENGINEERING TEAM IJT (STG186, N=5)
- XIV. TECHNICAL ORDER LIBRARY IJT (STG173, N=5)

## 411XOA CAREER LADDER JOBS

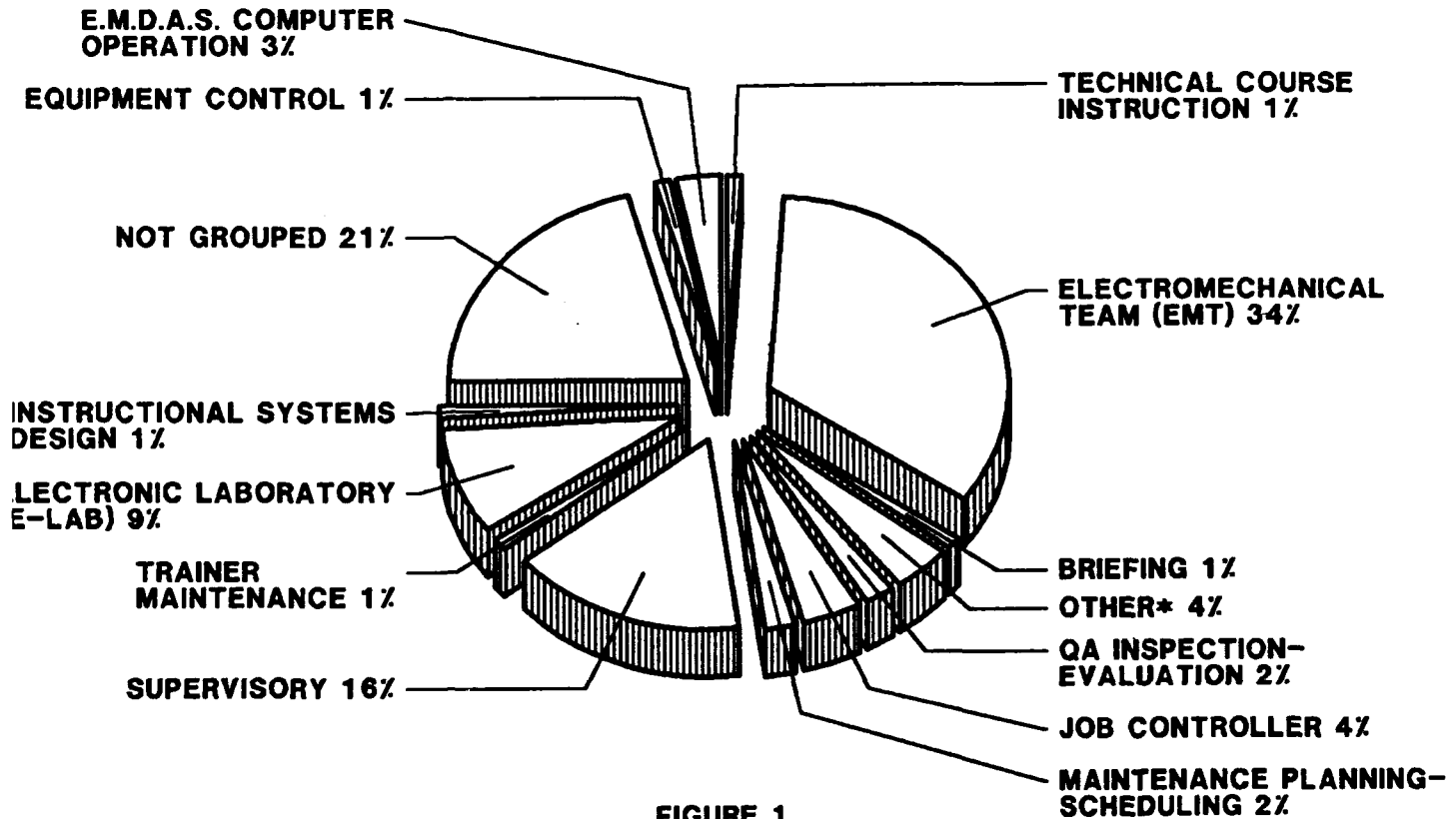


FIGURE 1

Includes (less than 1 percent):  
 Technical Engineering Team  
 Technical Order Library  
 Equipment Custodial  
 Missile Launch Analysis  
 Program Management

TABLE 3

## AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS\*\*

DUTIES	ELECTRO-MECHANICAL TEAM (STG119)		ELECTRONIC LABORATORY (STG154)		SUPERVISORY (STG054)		JOB CONTROL (STG113)		EMDAS COMPUTER OPERATION (STG141)		MAINTENANCE PLANNING-SCHEDULING (STG136)	
	*	1	1	3	10	19	4	21	6	60		
A ORGANIZING AND PLANNING	*	1	1	3	10	19	4	21	6	60		
B DIRECTING AND IMPLEMENTING	1	1	1	3	10	19	4	24	4	20		
C INSPECTING AND EVALUATING	4	3	3	3	10	19	4	7	6	4		
D TRAINING	2	3	3	3	10	19	4	4	3	2		
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY FUNCTIONS	7	12	12	12	19	19	40	40	7	6		
F PERFORMING GENERAL MISSILE MAINTENANCE AND SHOP FUNCTIONS	26	20	20	20	3	3	2	2	8	1		
G PERFORMING MISSILE TRAINER FUNCTIONS	1	*	*	*	*	*	0	0	0	0		
H PERFORMING LAUNCH FACILITY (LF) MAINTENANCE FUNCTIONS	40	*	*	*	*	*	0	0	0	0		
I PERFORMING LAUNCH CONTROL FACILITY (LCF) MAINTENANCE FUNCTIONS	12	0	0	0	*	*	*	*	0	0		
J MAINTAINING WS-133A-H (WING 2) WEAPON SYSTEMS	1	*	*	*	0	0	0	0	0	0		
K MAINTAINING WS-133A-H/CDB (WINGS 1,3,4, OR 5) WEAPON SYSTEMS	*	*	*	*	0	0	0	0	0	0		
L MAINTAINING WS-133B/CDB (WINGS 1X OR 6) WEAPON SYSTEMS	2	*	*	*	0	0	0	0	0	0		
M MAINTAINING WS-118 (WING 5) WEAPON SYSTEMS	1	*	*	*	0	0	0	0	0	0		
N PERFORMING OPERATIONAL TEST LAUNCH FUNCTIONS	*	*	*	*	0	0	0	0	0	0		
O PERFORMING LABORATORY CHECKOUTS AND INSPECTIONS OF WS-133 SYSTEMS	*	23	23	7	*	*	0	0	0	0		
P TROUBLESHOOTING WS-133 SYSTEMS EQUIPMENT	*	13	13	7	*	*	0	0	0	0		
Q CALIBRATING AND ADJUSTING WS-133 SYSTEMS EQUIPMENT	*	7	7	7	0	0	0	0	0	0		
R PERFORMING LABORATORY CHECKOUTS OF WS-118 SYSTEMS EQUIPMENT	*	1	1	1	*	*	0	0	0	0		
S TROUBLESHOOTING WS-118 SYSTEMS EQUIPMENT	*	1	1	1	0	0	0	0	0	0		
T REMOVING OR INSTALLING MISSILE EQUIPMENT COMPONENTS	1	12	12	12	0	0	0	0	*	0		
U PERFORMING MAINTENANCE DATA FUNCTIONS	0	*	*	*	*	*	1	1	65	6		

\*\* Columns may not add up to 100 percent due to rounding

\* Denotes less than 1 percent

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS\*\*

DUTIES	QA				EQUIPMENT CONTROL (STG126)	BRIEFING (STG116)	TRAINER MAINTENANCE (STG170)	ISD (STG111)	TECHNICAL COURSE INSTRUCTION (STG092)
	INSPECTION-EVALUATION (STG151)	INSPECTION-EVALUATION (STG151)	INSPECTION-EVALUATION (STG151)	INSPECTION-EVALUATION (STG151)					
A ORGANIZING AND PLANNING	7	1	2	6	14	4			
B DIRECTING AND IMPLEMENTING	9	3	13	1	12	4			
C INSPECTING AND EVALUATING	45	8	13	5	13	5			
D TRAINING	8	4	2	3	52	38			
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY FUNCTIONS	17	31	60	30	9	20			
F PERFORMING GENERAL MISSILE MAINTENANCE AND SHOP FUNCTIONS	8	46	5	22	0	4			
G PERFORMING MISSILE TRAINER FUNCTIONS	*	0	0	30	0	24			
H PERFORMING LAUNCH FACILITY (LF) MAINTENANCE FUNCTIONS	*	0	0	1	0	*			
I PERFORMING LAUNCH CONTROL FACILITY (LCF) MAINTENANCE FUNCTIONS	0	0	0	0	0	*			
J MAINTAINING WS-133A-H (WING 2) WEAPON SYSTEMS	*	0	0	0	0	0			
K MAINTAINING WS-133A-H/CDB (WINGS 1,3,4, OR 5) WEAPON SYSTEMS	0	0	0	0	0	0			
L MAINTAINING WS-133B/CDB (WINGS 1X OR 6) WEAPON SYSTEMS	0	0	0	0	0	0			
M MAINTAINING WS-118 (WING 5) WEAPON SYSTEMS	*	0	0	0	0	0			
N PERFORMING OPERATIONAL TEST LAUNCH FUNCTIONS	0	0	0	0	0	0			
O PERFORMING LABORATORY CHECKOUTS AND INSPECTIONS OF WS-133 SYSTEMS	3	3	0	*	0	0			
P TROUBLESHOOTING WS-133 SYSTEMS EQUIPMENT	0	0	0	0	0	0			
Q CALIBRATING AND ADJUSTING WS-133 SYSTEMS EQUIPMENT	0	0	0	0	0	0			
R PERFORMING LABORATORY CHECKOUTS OF WS-118 SYSTEMS EQUIPMENT	*	0	0	*	0	0			
S TROUBLESHOOTING WS-118 SYSTEMS EQUIPMENT	*	0	0	0	0	0			
T REMOVING OR INSTALLING MISSILE EQUIPMENT COMPONENTS	*	1	0	*	0	0			
U PERFORMING MAINTENANCE DATA FUNCTIONS	*	2	5	0	0	0			

\*\* Columns may not add up to 100 percent due to rounding

\* Denotes less than 1 percent

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS\*\*

DUTIES	TECHNICAL	TECHNICAL	TECHNICAL	EQUIPMENT	MISSILE	PROGRAM
	ENGINEERING TEAM (STG186)	ORDER LIBRARY (STG173)	CUSTODIAL (STG106)	LAUNCH ANALYSIS (STG195)	MANAGEMENT (STG096)	
A ORGANIZING AND PLANNING	3	0	8	15	28	
B DIRECTING AND IMPLEMENTING	1	0	2	23	5	
C INSPECTING AND EVALUATING	5	3	4	23	45	
D TRAINING	0	1	3	12	2	
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY FUNCTIONS	12	86	73	12	18	
F PERFORMING GENERAL MISSILE MAINTENANCE AND SHOP FUNCTIONS	19	10	7	3	2	
G PERFORMING MISSILE TRAINER FUNCTIONS	0	0	0	0	0	
H PERFORMING LAUNCH FACILITY (LF) MAINTENANCE FUNCTIONS	33	0	0	1	0	
I PERFORMING LAUNCH CONTROL FACILITY (LCF) MAINTENANCE FUNCTIONS	18	0	0	*	0	
J MAINTAINING WS-133A-M (WING 2) WEAPON SYSTEMS	5	0	0	0	0	
K MAINTAINING WS-133A-M/CDB (WINGS 1,3,4, OR 5) WEAPON SYSTEMS	0	0	0	0	0	
L MAINTAINING WS-133B/CDB (WINGS 1X OR 6) WEAPON SYSTEMS	1	0	0	0	0	
M MAINTAINING WS-118 (WING 5) WEAPON SYSTEMS	*	0	0	0	0	
N PERFORMING OPERATIONAL TEST LAUNCH FUNCTIONS	*	0	0	8	0	
O PERFORMING LABORATORY CHECKOUTS AND INSPECTIONS OF WS-133 SYSTEMS	0	0	0	0	0	
P TROUBLESHOOTING WS-133 SYSTEMS EQUIPMENT	*	0	0	0	0	
Q CALIBRATING AND ADJUSTING WS-133 SYSTEMS EQUIPMENT	*	0	0	0	0	
R PERFORMING LABORATORY CHECKOUTS OF WS-118 SYSTEMS EQUIPMENT	0	0	0	0	0	
S TROUBLESHOOTING WS-118 SYSTEMS EQUIPMENT	0	0	0	0	0	
T REMOVING OR INSTALLING MISSILE EQUIPMENT COMPONENTS	*	0	3	0	0	
U PERFORMING MAINTENANCE DATA FUNCTIONS	*	0	0	2	0	

\*\* Columns may not add up to 100 percent due to rounding

\* Denotes less than 1 percent

- XV. EQUIPMENT CUSTODIAL IJT (STG106, N=5)
- XVI. MISSILE LAUNCH ANALYSIS IJT (STG195, N=5)
- XVII. PROGRAM MANAGEMENT IJT (STG096, N=5)

The respondents forming these groups account for 79 percent of the survey sample. The remaining 21 percent were performing tasks or series of tasks which did not group with any of the defined jobs.

Table 4 displays selected background information, such as duty Air Force specialty code (DAFSC) and paygrade distributions across each group, average months in total active military service (TAFMS), and average number of tasks performed. For example, Table 4 shows that the EMT Cluster has 212 members who have an average TAFMS of 58 months and perform an average of 200 tasks.

#### Group Descriptions

The following paragraphs contain brief descriptions of the 17 jobs identified through the career ladder structure analysis. Appendix A lists representative tasks for each group.

I. ELECTROMECHANICAL TEAM (EMT) CLUSTER (STG119, N=212). This large cluster represents 34 percent of the total survey sample and performs the basic core job of the career ladder. Personnel in this job dispatch to missile launch facilities (LF) and launch control facilities (LCF) and are responsible for the maintenance of the missile launch systems located at each site. Weapon launch systems maintained include WS-133A-M, WS-133A-M/CDB, WS-133B/CDB, and WS-118A. There is a job variation within the EMT cluster known as Team Training Branch Instruction. These respondents administer OJT qualification training at each missile base. The largest part of EMT job time is spent performing LF maintenance functions, with smaller amounts of time being spent performing LCF maintenance duties, and general missile maintenance and shop functions. Typical tasks performed include:

- Raise or lower equipment into or from LFs
- Perform checkouts of LF storage batteries
- Inspect telescoping ladders
- Perform checkouts of LF power supply groups
- Perform operational ground equipment (OGE)/operational support equipment (OSE) startup or shutdown procedures
- Isolate LF faults
- Replace security system drawers

Sixty-three percent of these airmen hold the 5-skill level, while 32 percent hold the 3-skill level. Seventy-seven percent have a paygrade of E-4 or below. Personnel in this cluster average 58 months TAFMS, and 51 percent are in their first enlistment.

TABLE 4

SELECTED BACKGROUND DATA FOR 411X0A CAREER LADDER JOBS

	NUMBER IN GROUP	PERCENT OF SAMPLE	ELECTRO-MECHANICAL TEAM		ELECTRONIC LABORATORY		SUPERVISORY		JOB CONTROL		EMDAS COMPUTER OPERATION		MAINTENANCE PLANNING-SCHEDULING	
	212	34%	53	9%	99	16%	25	4%	18	3%	10	2%		
-----														
DAFSC DISTRIBUTION														
41130A	32%		9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
41150A	63%		87%	20%	84%	72%	70%							
41170A	5%		4%	80%	16%	28%	30%							
-----														
PAYGRADE DISTRIBUTION														
E-1--E-3	23%		4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
E-4	54%		40%	0%	36%	17%	40%							
E-5	21%		50%	14%	44%	61%	50%							
E-6	1%		6%	35%	20%	22%	10%							
E-7	0%		0%	49%	0%	0%	0%							
E-8	0%		0%	1%	0%	0%	0%							
-----														
AVERAGE NUMBER OF TASKS PERFORMED														
AVERAGE MONTHS TAFMS	200		193	73	31	25	22							
PERCENT IN FIRST ENLISTMENT	58		66	188	109	129	95							
PERCENT SUPERVISING	51%		10%	0%	4%	0%	0%							
	31%		36%	98%	28%	33%	10%							

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR 411X0A CAREER LADDER JOBS

	QA INSPECTION- EVALUATION	EQUIPMENT CONTROL	BRIEFING	TRAINER MAINTENANCE	ISD	TECHNICAL COURSE INSTRUCTION
NUMBER IN GROUP	15	7	8	6	6	6
PERCENT OF SAMPLE	2%	1%	1%	1%	1%	1%
-----						
DAFSC DISTRIBUTION						
41130A	0%	71%	0%	0%	0%	0%
41150A	20%	29%	87%	67%	50%	83%
41170A	80%	0%	13%	33%	50%	17%
-----						
PAYGRADE DISTRIBUTION						
E-1--E-3	0%	43%	0%	0%	0%	0%
E-4	0%	43%	62%	66%	17%	0%
E-5	34%	14%	25%	17%	33%	83%
E-6	53%	0%	13%	17%	50%	17%
E-7	13%	0%	0%	0%	0%	0%
E-8	0%	0%	0%	0%	0%	0%
-----						
AVERAGE NUMBER OF TASKS PERFORMED	79	25	14	112	42	40
AVERAGE MONTHS TAFMS	144	47	70	81	143	128
PERCENT IN FIRST ENLISTMENT	0%	71%	56%	17%	0%	0%
PERCENT SUPERVISING	47%	43%	12%	17%	33%	17%

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR 411X0A CAREER LADDER JOBS

	TECHNICAL ENGINEERING TEAM		TECHNICAL ORDER LIBRARY		EQUIPMENT CUSTODIAL		MISSILE LAUNCH ANALYSIS		PROGRAM MANAGEMENT	
	5 %	5 %	5 %	5 %	5 %	5 %	5 %	5 %	5 %	5 %
NUMBER IN GROUP										
PERCENT OF SAMPLE										
-----										
DAFSC DISTRIBUTION										
41139A	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%
41159A	20%	100%	100%	40%	40%	20%	0%	0%	0%	0%
41179A	80%	0%	0%	40%	40%	80%	100%	100%	100%	100%
-----										
PAYGRADE DISTRIBUTION										
E-1--E-3	0%	20%	20%	20%	20%	0%	0%	0%	0%	0%
E-4	0%	80%	80%	20%	20%	0%	0%	0%	0%	0%
E-5	20%	0%	0%	40%	40%	20%	0%	0%	0%	0%
E-6	80%	0%	0%	20%	20%	0%	0%	0%	40%	40%
E-7	0%	0%	0%	0%	0%	0%	60%	60%	60%	60%
E-8	0%	0%	0%	0%	0%	0%	20%	20%	0%	0%
-----										
AVERAGE NUMBER OF TASKS PERFORMED	111	8	8	36	74	17				
AVERAGE MONTHS TAFMS	155	50	50	104	190	178				
PERCENT IN FIRST ENLISTMENT	0%	40%	40%	20%	0%	0%				
PERCENT SUPERVISING	0%	0%	0%	0%	80%	0%				

II. ELECTRONIC LABORATORY (E-LAB) CLUSTER (STG154, N=53). These personnel represent 9 percent of the total survey sample. Their primary function is performing checkouts of electronic equipment, as well as repairing and supplying that equipment for EMTs in the field. Members performing this job do not dispatch to either LFs or LCFs. All checkouts and repairs are performed in the laboratory on base. E-lab personnel spend most of their job time performing laboratory checkouts and inspections of WS-133 systems equipment, and general missile maintenance and shop functions. Typical tasks performed include:

- Perform checkouts of C-631A cartridge tape units (CTU)
- Perform checkouts of of C-166B control monitors
- Perform checkouts of Minuteman power processor verification boxes (MPPVB)/power system verification boxes (PSVB)
- Remove or install integrated circuit cards of printed circuit assemblies
- Troubleshoot MPPVBs/PSVBs
- Clean electronic equipment
- Inspect AN/GSM-315 automatic test stations (E-35)

Ninety percent of these personnel are in paygrades E-4 and E-5, with an average TAFMS of 86 months. Eighty-seven percent hold the 5-skill level.

III. SUPERVISORY CLUSTER (STG054, N=99). This cluster constitutes 16 percent of the total sample. The majority of job incumbents are senior personnel who spend very little of their job time actually performing missile maintenance functions. The majority of their time is spent supervising, counseling, and evaluating subordinates. Other responsibilities include establishing and coordinating work methods and determining personnel and equipment requirements. Primary duties include organizing and planning, inspecting and evaluating, and directing and implementing. Common tasks performed include:

- Counsel subordinates on personal or military-related matters
- Write EPRs
- Inspect personnel for compliance with military standards
- Conduct performance feedback worksheet (PFW) sessions
- Write recommendations for awards or decorations
- Supervise Missile Systems Maintenance Specialists (AFSC 41150A)
- Interpret policies, directives, or procedures for subordinates

Eighty percent of these respondents hold the 7-skill level, and they report supervising an average of six airmen. Eighty-five percent have a paygrade of E-6 or above, with an average TAFMS of 188 months.

IV. JOB CONTROL IJT (STG113, N=25). Members in this job, representing 4 percent of the survey sample, are responsible for directing and controlling all maintenance assignments. Their function is to receive schedules from maintenance planning, determine the priority of jobs, and assign qualified EMTs to the designated job sites. These personnel spend 65 percent of their job time performing administrative and supply functions, and directing and implementing work orders and procedures. Some common tasks performed include:

- Issue job control numbers
- Adjust daily maintenance plans to meet operational commitments
- Maintain maintenance logs
- Dispatch maintenance technicians to work areas
- Annotate SAC Forms 799 (Pre-Dispatch Notification)
- Prepare workorders
- Direct maintenance of equipment, supplies, or workspace

Eighty percent of these personnel are in paygrades E-4 and E-5. The majority hold the 5-skill level and have an average TAFMS of 109 months.

V. EXPANDED MAINTENANCE DATA ANALYSIS SYSTEM (EMDAS) COMPUTER OPERATION CLUSTER (STG141, N=18). These airmen spend most of their job time performing maintenance data functions. Representing 3 percent of the total survey sample, members of this cluster are responsible for maintaining the EMDAS--a database that controls all EMT maintenance schedules, records prior maintenance performed, and includes special facts and figures specific to particular job sites. Typical tasks performed include:

- Monitor EMDAS systems
- Copy EMDAS files to tapes or printers
- Edit EMDAS files
- Verify EMDAS operational programs
- Perform EMDAS nightly maintenance
- Troubleshoot EMDAS modem lines
- Repair EMDAS modem faults

EMDAS personnel have an average TAFMS of 129 months, with 72 percent qualified at the 5-skill level; and 83 percent in paygrades E-5 and E-6.

VI. MAINTENANCE PLANNING-SCHEDULING IJT (STG136, N=10). Members performing this job spend 60 percent of their duty time organizing, planning, and directing maintenance needs and priorities. These personnel function as long-term, intermediate, and daily maintenance planners and schedulers through the use of the EMDAS. They are responsible for matching qualified EMT personnel with priority maintenance jobs, including routine maintenance at all LFs and LCFs within each wing. Members in this job represent 2 percent of the total sample. Typical tasks performed include:

- Participate in meetings, such as staff meetings, briefings, conferences, or workshops
- Schedule use of equipment or vehicles
- Schedule equipment utilization or maintenance schedules
- Schedule missile maintenance inspections
- Schedule work assignments and priorities
- Coordinate work with other sections
- Schedule equipment or facility inspections

These respondents are predominantly in paygrades E-4 and E-5, with 70 percent holding a 5-skill level, and an average TAFMS of 95 months.

VII. QUALITY ASSURANCE (QA) INSPECTION-EVALUATION IJT (STG151, N=15). These personnel are fairly senior, as most are in paygrades E-5 and E-6 and average 144 months TAFMS. They report spending 45 percent of their duty time performing inspections and evaluations, with smaller amounts spent performing administrative and supply functions. Members in this job evaluate EMT and E-lab proficiency, including on-site inspections of equipment and OJT instructor performance evaluations. Typical tasks performed by group members include:

- Evaluate technical order improvement reports
- Evaluate compliance with performance standards
- Verify new maintenance procedures or equipment
- Evaluate data on development or modifications of equipment
- Inspect condition or appearance of facilities or work areas
- Complete SAC Forms 1503 (Routing and Review of Quality Control Reports)
- Write inspection reports

QA personnel represent 2 percent of the total survey sample, with 80 percent holding the 7-skill level.

VIII. EQUIPMENT CONTROL IJT (STG126, N=7). Airmen in this job represent only 1 percent of the total sample. They are primarily junior personnel, with 71 percent holding the 3-skill level and 86 percent in paygrade E-4 or below. These airmen are responsible for controlling all equipment used by EMT personnel and issuing that equipment to EMTs dispatching into the field. They spend the majority of their job time performing administrative and supply functions and general missile maintenance and shop functions. Common tasks performed include:

- Issue supplies and equipment
- Complete AF Forms 1297 (Temporary Issue Receipt)
- Inventory equipment, tools, or supplies
- Inspect hoisting units, slings, or adapters
- Stencil, decal, or paint instructions or identifiers on equipment
- Paint tools or equipment
- Inspect for corrosion

Equipment Control personnel have an average TAFMS of 47 months, and 71 percent are in their first enlistment.

IX. BRIEFING IJT (STG116, N=8). Members in this job represent 1 percent of all survey respondents. Their primary function is briefing and debriefing EMTs prior to their dispatch and upon their return. Briefings include details on the assignment and any special conditions to be considered. Debriefings entail input from EMTs regarding maintenance performed at each site and notation of any further maintenance needed. Members in this job report spending 60 percent of their duty time performing administrative and supply functions. Typical tasks performed include:

- Conduct predispatch maintenance briefings
- Review workorder requests
- Review Maintenance Data Collection (MDC) forms
- Initiate or complete AFTO Forms 349 (Maintenance Data Collection Record)
- Initiate or complete AFTO Forms 350 (Reparable Item Processing Tag)

Eighty-seven percent of these airmen hold the 5-skill level, with 38 percent being in their first enlistment. Briefing personnel have an average TAFMS of 70 months, with 62 percent in paygrade E-4.

X. TRAINER MAINTENANCE IJT (STG170, N=6). Representing only 1 percent of the total survey sample, these personnel are responsible for inspections, checkouts, and overall maintenance of all weapon systems trainers used in formal OJT training at each base. EMT and E-Lab personnel utilize these

trainers both in the shop and in the classroom. Job incumbents report spending the majority of their job time performing missile trainer functions and administrative and supply functions. Some common tasks performed include:

- Perform inspections or lubrication of LF trainers
- Perform inspections of code change-verifier set trainers
- Remove or install components of LF trainers
- Perform startups, shutdowns, or emergency shutdowns of LF trainers
- Perform checkouts of LF trainers
- Perform checkouts of environmental control system/power procedure trainers
- Perform checkouts of guidance and control section trainers

Sixty-six percent of these personnel have a paygrade of E-4, and 67 percent function at the 5-skill level. Members in this job have an average TAFMS of 81 months.

XI. INSTRUCTIONAL SYSTEMS DESIGN IJT (STG111, N=6). These respondents constitute 1 percent of the overall sample. They are responsible for the development of formal OJT lesson plans and programs at each missile base. Members in this job perform training functions at each of their given bases, but occasionally work in conjunction with the Chanute Training Center when necessary. These personnel report spending 52 percent of their job time performing training functions. The following are some common tasks performed by group members:

- Develop new equipment training programs
- Write test questions
- Develop lessons using alternative instructional media, such as interactive courseware (ICW)
- Develop proficiency tests
- Evaluate training methods or techniques
- Evaluate instructors performance
- Evaluate effectiveness of training programs

Half of these respondents hold the 5-skill level, while the remaining are qualified at the 7-skill level. Members performing this job have an average TAFMS of 143 months, with 83 percent in paygrades E-5 and E-6.

XII. TECHNICAL COURSE INSTRUCTION IJT (STG092, N=6). All of these respondents are with the 3360th Technical Training Group, Chanute AFB, Illinois. They are responsible for teaching the C3ABR41130A 002, Apprentice Missile Systems Maintenance Specialist (ICBM) course. Members of this group equal 1 percent of the total sample and report spending 62 percent of their job time performing training functions. Typical tasks performed include:

- Perform operation of LF trainers
- Administer or score tests
- Locate information in technical, standard, or supply publications
- Prepare lesson plans
- Counsel trainees on training progress
- Develop or revise course curricula
- Write test questions

Job incumbents have an average TAFMS of 128 months. They are predominantly in paygrade E-5, with 83 percent holding the 5-skill level.

XIII. TECHNICAL ENGINEERING TEAM IJT (STG186, N=5). Members performing this job represent less than 1 percent of the overall sample. They are primarily senior personnel, with 80 percent in paygrade E-6 and an average TAFMS of 155 months. Their primary responsibility is assisting EMT personnel with missile launch weapon systems maintenance. When EMTs encounter a problem that has no technical data reference, technical engineering team members will dispatch to the job site and use additional technical references, coupled with past experience and job knowledge, to solve the problem. Common tasks performed include:

- Perform technical engineering branch (TEB) evaluations of maintenance problems
- Read or interpret wiring or schematic diagrams
- Isolate LCF faults
- Perform LCF command-line tone checkouts
- Perform checkouts of programmer groups
- Repair digital data groups
- Develop weapon systems engineering or procedural changes

Eighty percent of these personnel hold the 7-skill level. Primary duties include performing LF maintenance functions and general missile maintenance and shop functions.

XIV. TECHNICAL ORDER LIBRARY IJT (STG173, N=5). Members in this job report spending 86 percent of their duty time performing administrative and supply functions. They comprise less than 1 percent of the total survey sample, with all members qualified at the 5-skill level. Job incumbents maintain and control all technical orders (TOs) used by EMT, E-Lab, and formal OJT personnel. These airmen are also responsible for issuing TO kits to dispatching EMTs and posting any changes to existing TOs. Typical tasks performed by group members include:

- Maintain technical orders (TOs)
- Issue supplies and equipment
- Maintain publication libraries
- Maintain files of unclassified material or messages
- Complete AF Forms 1297 (Temporary Issue Receipt)
- Inventory tools, equipment, or supplies

Eighty percent of these personnel have a paygrade of E-4. Members performing this job have an average TAFMS of 50 months, with 40 percent being in their first enlistment.

XV. EQUIPMENT CUSTODIAL IJT (STG106, N=5). These respondents represent less than 1 percent of the overall sample. Their function differs from EQUIPMENT CONTROL in that they (equipment custodians) do not actually issue equipment to EMTs dispatching into the field. Members in this job are responsible for maintaining accounts of all equipment issued, used, and returned. They spend the majority of their job time performing administrative and supply functions. Some common tasks performed include:

- Coordinate on obtaining parts with base supply
- Maintain property custodian authorization/custody receipt listings (CA/CRL)
- Annotate AF Forms 126 (Custodian Request Log)
- Turn in surplus or worn-out equipment
- Establish equipment or tool requirements
- Identify supply problems
- Requisition tools and equipment

Members performing this job have an average TAFMS of 104 months, with 80 percent holding the 5- and 7-skill levels. Sixty percent of these respondents are in paygrades E-4 and E-5.

XVI. MISSILE LAUNCH ANALYSIS IJT (STG195, N=5). These personnel have a very unique job in that they are the only respondents in the career ladder who work with actual missile components. Their job entails performing an average of seven test launches per year. Each launch is monitored in sequence of events from ground system launch initiation to splashdown. Job incumbents then write a follow-up report containing a general description of how the missile components and launch systems operated. Any problems encountered during the test launch are reported separately, and include an analysis of each problem with recommended solutions. Recipients of each report may include defense contractors, operational wings, and any personnel dealing with the given missile or ground launch systems. Typical tasks performed include:

- Direct missile operational test launch (OTL) anomalous procedures
- Write staff studies, surveys, or special reports, other than training reports
- Implement OTL anomalous procedures
- Determine missile flight malfunctions using telemetry data
- Compile inflight performance analysis data for test summary and evaluation reports (TSER)
- Analyze missile performance data during pre-launch tests or missile flights
- Monitor inflight performance

These respondents represent less than 1 percent of the total survey sample. They have an average TAFMS of 190 months, with 80 percent in paygrade E-7 or above and 80 percent holding the 7-skill level.

XVII. PROGRAM MANAGEMENT IJT (STG096, N=5). Members in this job represent less than 1 percent of the overall sample. Their primary function is the acquisition and management of all new and modified equipment, ranging from missile components to any existing support systems. These personnel also act as evaluators of proposed changes and new or modified equipment. Common tasks performed include:

- Evaluate data on development or modifications of equipment
- Participate in meetings, such as staff meetings, briefings, conferences, or workshops
- Evaluate engineering change proposals
- Participate in preliminary, system, or critical design reviews
- Evaluate technical order improvement reports
- Review proposed technical data changes
- Participate in technical order verification conferences

All of these respondents hold the 7-skill level. They have an average TAFMS of 178 months, with 40 percent in paygrade E-6 and 60 percent in paygrade E-7.

The issue of the Minuteman II standdown was considered in identifying the AFSC 411X0A career ladder structure. Ten of the seventeen jobs identified contain personnel who reported maintaining Minuteman II systems. None of these jobs, however, revolve exclusively around these systems, as Minuteman III and Peacekeeper weapon systems are also directly related to the jobs. This indicates that while the number of personnel who perform these jobs may decrease, the jobs themselves still exist in the career ladder structure.

### Comparison Of Current Group Descriptions To Previous Study

The results of the specialty job analysis were compared to the previous OSRs, AFPT 90-316-529 and AFPT 90-316-545, dated July 1985 and March 1986. Table 5 lists the major jobs identified in the 1992 report and their equivalent jobs from the 1985 and 1986 OSRs. A review of the jobs performed by the current sample indicates that 13 of the 17 1992 jobs were matched to similar jobs identified in either the 1985 or 1986 report. The four jobs not matched include EMDAS Computer Operation, ISD, Technical Order Library, and Program Management.

The identified career ladder structure for the AFSC 411X0A career ladder in the present survey indicates less specialization among respondents. For example, EMT and E-Lab personnel in the current sample identified themselves as single, coherent clusters, while EMT and E-Lab jobs in the 1985 and 1986 reports were identified by the specific system (i.e., WS-133A-M, WS-133B/CDB) for which they were responsible.

### ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information may be used to evaluate how well career ladder documents, such as AFR 39-1 Specialty Descriptions and the STS, reflect what career ladder personnel are actually doing in the field.

Nine-skill level and CEM code personnel in the 41XXX career field were not surveyed and are not discussed in this report.

The distribution of skill-level groups across the career ladder jobs is displayed in Table 6, while Table 7 offers another perspective by displaying percent time spent on each duty across the skill-level groups.

A typical pattern of progression is noted within the AFSC 411X0A career ladder, with personnel at the 3-skill level spending most of their time on technical tasks. More relative time is spent on duties involving supervisory, managerial, and administrative tasks (see Table 7, Duties A, B, C, D, and E) as they move upward to the 5- and 7-skill levels.

### Skill-Level Descriptions

DAFSC 41130A. The 90 airmen in the 3-skill level group, representing 15 percent of the survey sample, perform an average of 147 tasks. As shown in Table 6, 74 percent of these airmen are in the EMT cluster. They spend approximately 35 percent of their time performing LF maintenance functions, while 31 percent of their time is spent performing general missile maintenance and shop functions (see Table 7).

TABLE 5

## SPECIALTY JOB COMPARISONS BETWEEN CURRENT, 1985, AND 1986 SURVEYS

CURRENT SURVEY (N=618)	PERCENT OF SAMPLE	1985 (316X0G) SURVEY (N=805)	PERCENT OF SAMPLE	1986 (316X2G) SURVEY (N=80)	PERCENT OF SAMPLE
E-MT	(N=212) 34	E-MT (N=21) 3 (WS-133A-M)		-	
		E-MT (N=241) 30 (WS-133A-M/CDB)			
		E-MT (N=81) 10 (WS-133B/CDB)			
E-LAB	(N=53) 9	-		E-LAB--SENIOR (N=41) 51 E-LAB--JUNIOR (N=4) 5 (WS-133A-M AND WS-133A-M/CDB)	
				E-LAB--JUNIOR (N=3) 4 (WS-133B/CDB)	
SUPERVISORY	(N=99) 16	SUPERVISOR (N=44) 5		SUPERVISOR (N=12) 15	
JOB CONTROL	(N=25) 4	JOB CONTROLLER (N=27) 3 AND SCHEDULER		-	
MAINTENANCE PLANNING-SCHEDULING	(N=10) 2	MAINTENANCE PLANNER (N=5) *		-	
QA INSPECTION-EVALUATION	(N=15) 2	QUALITY EVALUATION (N=30) 4		QUALITY CONTROL (N=8) 10 EVALUATOR	
EQUIPMENT CONTROL	(N=7) 1	EQUIPMENT CONTROLLERS (N=5) *		-	
BRIEFING	(N=8) 1	BRIEFER (N=7) *		-	
TRAINER MAINTENANCE	(N=6) 1	TRAINER MAINTENANCE (N=6) *		-	
TECHNICAL COURSE INSTRUCTION	(N=6) 1	RESIDENT COURSE INSTRUCTOR (N=9) 1		-	

\* Denotes less than 1 percent  
- Indicates no match in report

TABLE 5 (CONTINUED)

SPECIALTY JOB COMPARISONS BETWEEN CURRENT, 1985, AND 1986 SURVEYS

<u>CURRENT SURVEY (N=618)</u>	<u>PERCENT OF SAMPLE</u>	<u>1985 (316X06) SURVEY (N=805)</u>	<u>PERCENT OF SAMPLE</u>	<u>1986 (316X26) SURVEY (N=80)</u>	<u>PERCENT OF SAMPLE</u>
TECH ENGINEER (N=5) TEAM	*	TECH ENGINEER (N=7) BRANCH	*	-	-
EQUIPMENT (N=5) CUSTODIAL	*	SUPPLY MONITOR (N=5)	*	-	-
MISSILE LAUNCH (N=5) ANALYSIS	*	OPERATIONAL (N=19) TEST LAUNCH	2	INSTRUMENTATION (N=3) LABORATORY TECH	4
EMDAS COMPUTER (N=18) OPERATION	3	-	-	-	-
ISD (N=6)	1	-	-	-	-
TECHNICAL (N=5) ORDER LIBRARY	*	-	-	-	-
PROGRAM (N=5) MANAGEMENT	*	-	-	-	-

\* Denotes less than 1 percent  
 - Indicates no match in report

TABLE 6  
 DISTRIBUTION OF SKILL-LEVEL MEMBERS  
 ACROSS CAREER LADDER JOBS  
 (PERCENT)\*\*

<u>JOB</u>	<u>41130A (N=90)</u>	<u>41150A (N=340)</u>	<u>41170A (N=188)</u>
ELECTROMECHANICAL TEAM (EMT)	74	40	5
ELECTRONIC LABORATORY (E-LAB)	6	14	1
SUPERVISORY	0	6	42
JOB CONTROL	0	6	2
EXPANDED MAINTENANCE DATA ANALYSIS (EMDAS) COMPUTER OPERATION	0	4	3
MAINTENANCE PLANNING-SCHEDULING	0	2	2
QUALITY ASSURANCE (QA) INSPECTION-EVALUATION	0	*	6
EQUIPMENT CONTROL	6	*	0
BRIEFING	0	2	*
TRAINER MAINTENANCE	0	1	1
INSTRUCTIONAL SYSTEMS DESIGN (ISD)	0	*	2
TECHNICAL COURSE INSTRUCTION	0	1	*
TECHNICAL ENGINEERING TEAM	0	*	2
TECHNICAL ORDER LIBRARY	0	1	0
EQUIPMENT CUSTODIAL	1	*	1
MISSILE LAUNCH ANALYSIS	0	*	2
PROGRAM MANAGEMENT	0	0	3
NOT GROUPED	13	20	27

\*\* Columns may not add to 100 percent due to rounding  
 \* Denotes less than 1 percent

TABLE 7

TIME SPENT ON DUTIES BY MEMBERS OF SKILL-LEVEL GROUPS  
(RELATIVE PERCENT OF JOB TIME)\*\*

<u>JOB</u>	<u>41130A</u> <u>(N=90)</u>	<u>41150A</u> <u>(N=340)</u>	<u>41170A</u> <u>(N=188)</u>
A ORGANIZING AND PLANNING	1	8	19
B DIRECTING AND IMPLEMENTING	1	6	16
C INSPECTING AND EVALUATING	2	7	20
D TRAINING	*	6	10
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY FUNCTIONS	11	19	19
F PERFORMING GENERAL MISSILE MAINTENANCE AND SHOP FUNCTIONS	31	16	6
G PERFORMING MISSILE TRAINER FUNCTIONS	*	1	1
H PERFORMING LAUNCH FACILITY (LF) MAINTENANCE FUNCTIONS	35	16	3
I PERFORMING LAUNCH CONTROL FACILITY (LCF) MAINTENANCE FUNCTIONS	10	5	1
J MAINTAINING WS-133A-M (WING 2) WEAPON SYSTEMS	*	*	*
K MAINTAINING WS-133A-M/CDB (WINGS 1,3,4, OR 5) WEAPON SYSTEMS	*	*	*
L MAINTAINING WS-133B/CDB (WINGS 1X OR 6) WEAPON SYSTEMS	2	*	*
M MAINTAINING WS-118 (WING 5) WEAPON SYSTEMS	*	*	*
N PERFORMING OPERATIONAL TEST LAUNCH FUNCTIONS	*	*	*
O PERFORMING LABORATORY CHECKOUTS AND INSPECTIONS OF WS-133 SYSTEMS	2	4	*
P TROUBLESHOOTING WS-133 SYSTEMS EQUIPMENT	1	2	*
Q CALIBRATING AND ADJUSTING WS-133 SYSTEMS EQUIPMENT	*	1	*
R PERFORMING LABORATORY CHECKOUTS OF WS-118 SYSTEMS EQUIPMENT	*	*	*
S TROUBLESHOOTING WS-118 SYSTEMS EQUIPMENT	*	*	*
T REMOVING OR INSTALLING MISSILE EQUIPMENT COMPONENTS	2	2	*
U PERFORMING MAINTENANCE DATA FUNCTIONS	*	3	2

\*\* Columns may not add to 100 percent due to rounding

\* Denotes less than 1 percent

Examples of tasks likely to be performed by 3-skill level personnel include: performing checkouts of batteries and replacing security system drawers. Table 8 displays selected representative tasks performed by a majority of these airmen.

DAFSC 41150A. The 340 airmen in the 5-skill level group represent 55 percent of the total survey sample and perform an average of 127 tasks. Table 7 shows that 5-skill level personnel spend 47 percent of their relative job time performing duties which involve supervisory, managerial, training, and administrative tasks. The remaining 54 percent is spent on a broad range of technical duties comparable to those performed by 3-skill level personnel. Representative tasks performed by 5-skill level incumbents are listed in Table 9.

Although 5-skill level personnel spend more than half of their job time performing highly technical duties, it is the percent of job time spent on supervisory functions that distinguishes them from 3-skill level specialists. Table 10 gives examples of tasks which best distinguish 5-skill level personnel from their junior counterparts.

DAFSC 41170A. Seven-skill level personnel represent 30 percent of the survey sample and perform an average of 77 tasks. Eighty-four percent of their relative job time is spent on tasks in supervisory, managerial, training, and administrative duties (nearly double that of 5-skill level personnel). The remaining 16 percent of their time is dedicated to technical duties (see Table 7). Table 11 lists representative tasks for these incumbents.

Tasks which best distinguish 7-skill level personnel from their junior counterparts are presented in Table 12. As expected, the key difference is a much greater emphasis on supervisory functions for 7-skill level airmen.

#### Summary

Normal career ladder progression within the AFSC 411X0A career ladder is evident, with personnel at the 3-skill level spending the vast majority of their job time performing technical tasks. A moderate shift towards supervisory functions occurs at the 5-skill level, with members still spending more than 50 percent of their duty time performing technical functions. Personnel at the 7-skill level primarily perform supervisory functions, although a small percentage of their time is still spent on technical duties.

### ANALYSIS OF AFR 39-1 SPECIALTY DESCRIPTIONS

Survey data were compared to the AFR 39-1 Specialty Descriptions for Missile Systems Maintenance Specialists and Technicians, dated 15 March 1991, effective 30 April 1991. The descriptions for the 3-, 5-, and 7-skill levels were generally accurate, depicting the highly technical aspects of the job,

TABLE 8

## REPRESENTATIVE TASKS PERFORMED BY 41130A PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=90)
F391 TIGHTEN BOLTS OR NUTS TO SPECIFIED TORQUE VALUES	83
F322 INSPECT FOR CORROSION	77
H493 RAISE OR LOWER EQUIPMENT INTO OR FROM LFs	76
F371 REMOVE OR INSTALL RADIO FREQUENCY INTERFERENCE (RFI) SHIELD GASKETS	74
H459 INSPECT TELESCOPING LADDERS	74
F360 REMOVE OR INSTALL ACCESS COVERS, PLATES, OR PANELS	73
H467 PERFORM CHECKOUTS OF IMPROVED MINUTEMAN PHYSICAL SECURITY SYSTEMS (IMPSS)	73
F327 INSPECT OR INSTALL SAFETY DEVICES, SUCH AS SAFETY BARRIERS, LANYARDS, OR PERSONNEL HARNESSSES	72
F339 PERFORM CHECKOUTS OF BATTERIES	72
H522 REPLACE SECURITY SYSTEM DRAWERS	72
H476 PERFORM CHECKOUTS OF LF STORAGE BATTERIES	71
H454 CHANGE SECONDARY DOOR LOCK COMBINATIONS	71
F328 INSPECT OR OPERATE EMERGENCY BREATHING APPARATUS	70
H462 ISOLATE LF FAULTS	70
H474 PERFORM CHECKOUTS OF LF MOTOR GENERATORS	70
H530 TROUBLESHOOT IMPSSs	70
F365 REMOVE OR INSTALL ELECTRONIC EQUIPMENT DRAWERS	70
H465 PERFORM AEROSPACE VEHICLE EQUIPMENT (AVE) STARTUPS USING CONTROL MONITORS (C-166B)	70
F350 PERFORM OPERATIONAL GROUND EQUIPMENT (OGE)/OPERATIONAL SUPPORT EQUIPMENT (OSE) STARTUP OR SHUTDOWN PROCEDURES	69
F351 PERFORM OPERATOR INSPECTIONS ON MAINTENANCE VEHICLES	69

TABLE 9

## REPRESENTATIVE TASKS PERFORMED BY 41150A PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=340)
F391 TIGHTEN BOLTS OR NUTS TO SPECIFIED TORQUE VALUES	56
E246 INITIATE OR COMPLETE AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	53
E256 LOCATE INFORMATION IN TECHNICAL, STANDARD, OR SUPPLY PUBLICATIONS	52
F358 READ OR INTERPRET WIRING OR SCHEMATIC DIAGRAMS	52
E208 COMPLETE AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	51
F322 INSPECT FOR CORROSION	51
F368 REMOVE OR INSTALL MINOR HARDWARE, SUCH AS HINGES OR FASTENERS	48
F360 REMOVE OR INSTALL ACCESS COVERS, PLATES, OR PANELS	47
F351 PERFORM OPERATOR INSPECTIONS ON MAINTENANCE VEHICLES	47
E247 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	47
F339 PERFORM CHECKOUTS OF BATTERIES	46
F323 INSPECT HOISTING UNITS, SLINGS, OR ADAPTERS	43
F365 REMOVE OR INSTALL ELECTRONIC EQUIPMENT DRAWERS	43
F350 PERFORM OPERATIONAL GROUND EQUIPMENT (OGE)/OPERATIONAL SUPPORT EQUIPMENT (OSE) STARTUP OR SHUTDOWN PROCEDURES	41
H493 RAISE OR LOWER EQUIPMENT INTO OR FROM LFs	41
A4 COORDINATE WORK WITH OTHER SECTIONS	40
A23 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	36

TABLE 10

TASKS WHICH BEST DIFFERENTIATE BETWEEN  
DAFSC 41130A AND DAFSC 41150A PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	41130A (N=90)	41150A (N=340)	DIFFERENCE
H495 REPAIR ELECTROMECHANICAL LINEAR ACTUATORS (EMLAs)	71	33	38
H467 PERFORM CHECKOUTS OF IMPROVED MINUTEMAN PHYSICAL SECURITY SYSTEMS (IMPSS)	73	37	36
H478 PERFORM CHECKOUTS OF OZ SECURITY SYSTEMS	69	33	36
H493 RAISE OR LOWER EQUIPMENT INTO OR FROM LFs	76	41	35
H522 REPLACE SECURITY SYSTEM DRAWERS	72	37	35
F327 INSPECT OR INSTALL SAFETY DEVICES, SUCH AS SAFETY BARRIERS, LANYARDS, OR PERSONNEL HARNESES	72	38	34
H459 INSPECT TELESCOPING LADDERS	74	40	34
H465 PERFORM AEROSPACE VEHICLE EQUIPMENT (AVE) STARTUPS USING CONTROL MONITORS (C-166B)	70	36	34
H457 EVACUATE LFs FOR EWO LAUNCH CONDITIONS	66	32	34
-----			
A4 COORDINATE WORK WITH OTHER SECTIONS	8	40	-32
A23 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	11	36	-25
B41 CONDUCT BRIEFINGS	6	29	-23
C109 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	9	31	-22
D154 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	3	25	-22
A3 COORDINATE ACTIVITIES OF SPECIALISTS	1	22	-21

TABLE 11

## REPRESENTATIVE TASKS PERFORMED BY 41170A PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=188)
A23 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	74
A4 COORDINATE WORK WITH OTHER SECTIONS	71
B44 CCUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED MATTERS	62
C138 WRITE EPRs	59
C109 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	57
A3 COORDINATE ACTIVITIES OF SPECIALISTS	56
E256 LOCATE INFORMATION IN TECHNICAL, STANDARD, OR SUPPLY PUBLICATIONS	51
E302 WRITE CORRESPONDENCE	49
C81 CONDUCT PERFORMANCE FEEDBACK WORKSHEET (PFW) SESSIONS	49
A6 DETERMINE SPACE, EQUIPMENT, OR SUPPLY REQUIREMENTS	47
B70 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	47
B41 CONDUCT BRIEFINGS	47
C108 INSPECT CONDITION OR APPEARANCE OF FACILITIES OR WORK AREAS	46
C140 WRITE RECOMMENDATIONS FOR AWARDS OR DECORATIONS	44
A5 DETERMINE PERSONNEL REQUIREMENTS	44
B76 SUPERVISE MISSILE SYSTEMS MAINTENANCE SPECIALISTS (AFSC 41150A)	44
A13 DEVELOP WORK METHODS OR PROCEDURES	43
A19 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	43

TABLE 12

TASKS WHICH BEST DIFFERENTIATE BETWEEN  
DAFSC 41150A AND DAFSC 41170A PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	41150A (N=340)	41170A (N=188)	DIFFERENCE
F391 TIGHTEN BOLTS OR NUTS TO SPECIFIED TORQUE VALUES	55	15	40
F371 REMOVE OR INSTALL RADIO FREQUENCY INTERFERENCE (RFI) SHIELD GASKETS	47	8	39
F339 PERFORM CHECKOUTS OF BATTERIES	46	8	38
F322 INSPECT FOR CORROSION	51	16	35
F373 REMOVE OR INSTALL SHEAR PINS	39	6	33
H459 INSPECT TELESCOPING LADDERS	40	7	33
H493 RAISE OR LOWER EQUIPMENT INTO OR FROM LFs	40	8	32
H520 REPLACE LF STORAGE BATTERIES	38	6	32
H454 CHECK SECONDARY DOOR LOCK COMBINATIONS	37	5	32
-----			
E302 WRITE CORRESPONDENCE	11	49	-38
A33 SCHEDULE LEAVES OR PASSES	7	44	-37
A3 COORDINATE ACTIVITIES OF SPECIALISTS	22	57	-35
B77 SUPERVISE MISSILE SYSTEMS MAINTENANCE TECHNICIANS (AFSC 41170A)	6	40	-34
B70 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	15	48	-33
C138 WRITE EPRS	26	59	-33
B44 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED MATTERS	30	62	-32
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	5	37	-32
C140 WRITE RECOMMENDATIONS FOR AWARDS OR DECORATIONS	13	44	-31
A18 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS, OR STANDING OPERATING PROCEDURES	8	39	-31

as well as the increase in supervisory responsibilities previously described in the DAFSC analysis. The descriptions also capture the primary responsibilities of members in the 17 jobs identified by the job structure analysis process.

## TRAINING ANALYSIS

Occupational survey data are sources of information which can be used to assist in the development of relevant training programs for entry-level personnel. Factors used to evaluate entry-level Missile Systems Maintenance training include jobs being performed by first-enlistment personnel, overall distribution of first-enlistment personnel across career ladder jobs, percent first-job (1-24 month TAFMS) and first-enlistment (1-48 months TAFMS) members performing specific tasks or using specific equipment items, ratings of how much TE tasks should receive in formal training, and ratings of relative TD.

### First-Enlistment Personnel

In this study, there are 140 members in their first enlistment (1-48 months TAFMS), representing 23 percent of the survey sample. As displayed in Table 13, approximately 96 percent of their duty time is devoted to technical or administrative task performance, the majority of which is contained in four duties: performing LF maintenance functions (36 percent); general missile maintenance and shop functions (29 percent); administrative and supply functions (12 percent); and LCF maintenance functions (10 percent). The vast majority of first-term personnel are involved in day-to-day Missile Systems Maintenance activities. Table 14 displays some of the tasks performed by first-enlistment personnel. Examples include: inspect telescoping ladders and change secondary door lock combinations. Table 15 displays equipment items used by 30 percent or more of first-job or first-enlistment personnel.

Within the groups identified in the SPECIALTY JOBS section of this report, first-term personnel were present in 8 of the 17 jobs. As shown in Figure 2, 77 percent of first-term personnel surveyed are grouped in the EMT cluster.

### TE and TD Data

TE and TD data are secondary factors that can help technical school personnel decide which entry-level training tasks to emphasize. These ratings, based on the judgments of senior career ladder NCOs at operational units, provide training personnel with a rank-ordering of those tasks considered important for first-term airman training (TE), and a measure of the difficulty of those tasks (TD). When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors (TE and TD), accompanied by moderate to high

TABLE 13

RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY  
FIRST ENLISTMENT AFSC 411X0A PERSONNEL\*\*

TASKS	PERCENT TIME SPENT
A ORGANIZING AND PLANNING	*
B DIRECTING AND IMPLEMENTING	1
C EVALUATING AND INSPECTING	2
D TRAINING	*
E PERFORMING ADMINISTRATIVE AND SUPPLY FUNCTIONS	12
F PERFORMING GENERAL MISSILE MAINTENANCE AND SHOP FUNCTIONS	29
G PERFORMING MISSILE TRAINER FUNCTIONS	*
H PERFORMING LAUNCH FACILITY (LF) MAINTENANCE FUNCTIONS	36
I PERFORMING LAUNCH CONTROL FACILITY (LCF) MAINTENANCE FUNCTIONS	10
J MAINTAINING WS-133A-M (WING 2) WEAPON SYSTEMS	1
K MAINTAINING WS-133A-M/CDB (WINGS 1, 3, 4, OR 5) WEAPON SYSTEMS	*
L MAINTAINING WS-133B/CDB (WINGS 1X OR 6) WEAPON SYSTEMS	1
M MAINTAINING WS-118 (WING 5) WEAPONS SYSTEMS	*
N PERFORMING OPERATIONAL TEST LAUNCH FUNCTIONS	*
O PERFORMING LABORATORY CHECKOUTS AND INSPECTIONS OF WS-133 SYSTEMS EQUIPMENT	1
P TROUBLESHOOTING WS-133 SYSTEMS EQUIPMENT	*
Q CALIBRATING AND ADJUSTING WS-133 SYSTEMS EQUIPMENT	*
R PERFORMING LABORATORY CHECKOUTS OF WS-118 SYSTEMS EQUIPMENT	*
S TROUBLESHOOTING WS-118 SYSTEMS EQUIPMENT	*
T REMOVING OR INSTALLING MISSILE EQUIPMENT COMPONENTS	1
U PERFORMING MAINTENANCE DATA FUNCTIONS	*

\*\* Columns may not add up to 100 percent due to rounding

\* Denotes less than 1 percent

TABLE 14

REPRESENTATIVE TASKS PERFORMED BY  
FIRST-ENLISTMENT 411X0A PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=140)
F391 TIGHTEN BOLTS OR NUTS TO SPECIFIED TORQUE VALUES	81
H493 RAISE OR LOWER EQUIPMENT INTO OR FROM LF <sub>s</sub>	78
H459 INSPECT TELESCOPING LADDERS	78
H467 PERFORM CHECKOUTS OF IMPROVED MINUTEMAN PHYSICAL SECURITY SYSTEMS (IMPSS)	77
H522 REPLACE SECURITY SYSTEM DRAWERS	76
H454 CHANGE SECONDARY DOOR LOCK COMBINATIONS	76
H462 ISOLATE LF FAULTS	75
H476 PERFORM CHECKOUTS OF LF STORAGE BATTERIES	75
F371 REMOVE OR INSTALL RADIO FREQUENCY INTERFERENCE (RFI) SHIELD GASKETS	75
H530 TROUBLESHOOT IMPSS <sub>s</sub>	74
F339 PERFORM CHECKOUTS OF BATTERIES	74
H489 PERFORM NORMAL MISSILE SHUTDOWN PROCEDURES	73
H475 PERFORM CHECKOUTS OF LF POWER SUPPLY GROUPS	73
I594 UNLOAD AND SHUT DOWN LCC MOTOR GENERATORS	73
H465 PERFORM AEROSPACE VEHICLE EQUIPMENT (AVE) STARTUPS USING CONTROL MONITORS (C-166B)	72
F351 PERFORM OPERATOR INSPECTIONS ON MAINTENANCE VEHICLES	72
F350 PERFORM OPERATIONAL GROUND EQUIPMENT (OGE)/OPERATIONAL SUPPORT EQUIPMENT (OSE) STARTUP OR SHUTDOWN PROCEDURES	72
H474 PERFORM CHECKOUTS OF LF MOTOR GENERATORS	72
H469 PERFORM CHECKOUTS OF LF BATTERY CHARGER SETS	72
H450 ADJUST ELECTROMECHANICAL LINEAR ACTUATORS (EMLA)	72
F365 REMOVE OR INSTALL ELECTRONIC EQUIPMENT DRAWERS	71
H464 LOAD MISSILE COMPUTER MEMORIES	71
F322 INSPECT FOR CORROSION	71
F360 REMOVE OR INSTALL ACCESS COVERS, PLATES, OR PANELS	71
H468 PERFORM CHECKOUTS OF INNER ZONE (IZ) SECURITY SYSTEMS	71
H466 PERFORM AVE STARTUPS WITHOUT USING CONTROL MONITOR (C-166B)	71
H520 REPLACE LF STORAGE BATTERIES	71
H463 ISOLATE OR DEISOLATE LF INTERCONNECTING BOXES	71
H506 REPAIR SECURITY PIT VAULT DOORS	71
H505 REPAIR SECONDARY DOORS	71
H453 CHANGE MISSILE COMMAND SIGNAL DECODER (CSD(M)) CODES	70

TABLE 15

EQUIPMENT ITEMS USED BY MORE THAN 30 PERCENT OF FIRST JOB  
OR FIRST-ENLISTMENT AFSC 411X0A PERSONNEL

<u>EQUIPMENT</u>	<u>1ST JOB (N=39)</u>	<u>1ST ENL (N=140)</u>
AN/GJM-26 ELECTRICAL POWER TEST SET	36	29
AN/GSM-121 ELECTRICAL POWER TEST SET	36	31
AN/GSM-85 CONNECTOR ADAPTER SET	41	46
AN/GSM-94 CONNECTOR ADAPTER SET	44	44
AN/GSQ-96 CODE CHANGE VERIFIER SET	41	44
AN/GTM-3A TELEPHONE TEST SET	21	35
AC VOLTMETERS	56	64
AMMETERS	49	45
BONDING METERS	67	73
BREAKOUT BOXES	36	48
CRIMPING TOOLS	51	67
CURRENT PROBES	31	27
DC VOLTMETERS	56	66
DECADE RESISTORS	23	31
DIGITAL VOLTMETERS	74	74
ELECTRIC DRILLS	64	77
FREQUENCY COUNTERS OR METERS	41	51
PORTABLE HEATERS	59	57
IMPEDANCE BRIDGES	36	50
IMPROVED MINUTEMAN PHYSICAL SECURITY SYSTEM (IMPSS)		
PRINTERS	67	74
INSERTER/EXTRACTOR TOOLS	31	39
MEGOHMETERS	69	78
MULTIMETERS (FLUKEMETERS)	72	81
PLUMB BOBS	33	42
POWER SUPPLIES	36	51
SOLDERING IRONS	44	57
STOP WATCHES	59	76
THERMOMETERS	54	69
TIME DOMAIN REFLECTOMETERS	51	52
TORQUE SCREWDRIVERS	31	49
TORQUE WRENCHES	85	86
FORKLIFTS	59	54
FOUR-WHEEL DRIVE VEHICLES	38	41
MECHANICAL MAINTENANCE TRUCK HOISTS	54	56
MECHANICAL MAINTENANCE TRUCKS (M-VANS)	82	74
MOTOR GENERATOR/BATTERY MAINTENANCE VAN HOISTS	28	43
MOTOR GENERATOR/BATTERY MAINTENANCE VANS (B-VANS)	56	55
PICK-UP TRUCKS	85	79
PORTABLE HOISTS	49	50
UTILITY VANS	74	70
WARREN CRANES	64	60
2 1/2-TON TRUCKS	46	49

## FIRST-ENLISTMENT PERSONNEL JOBS

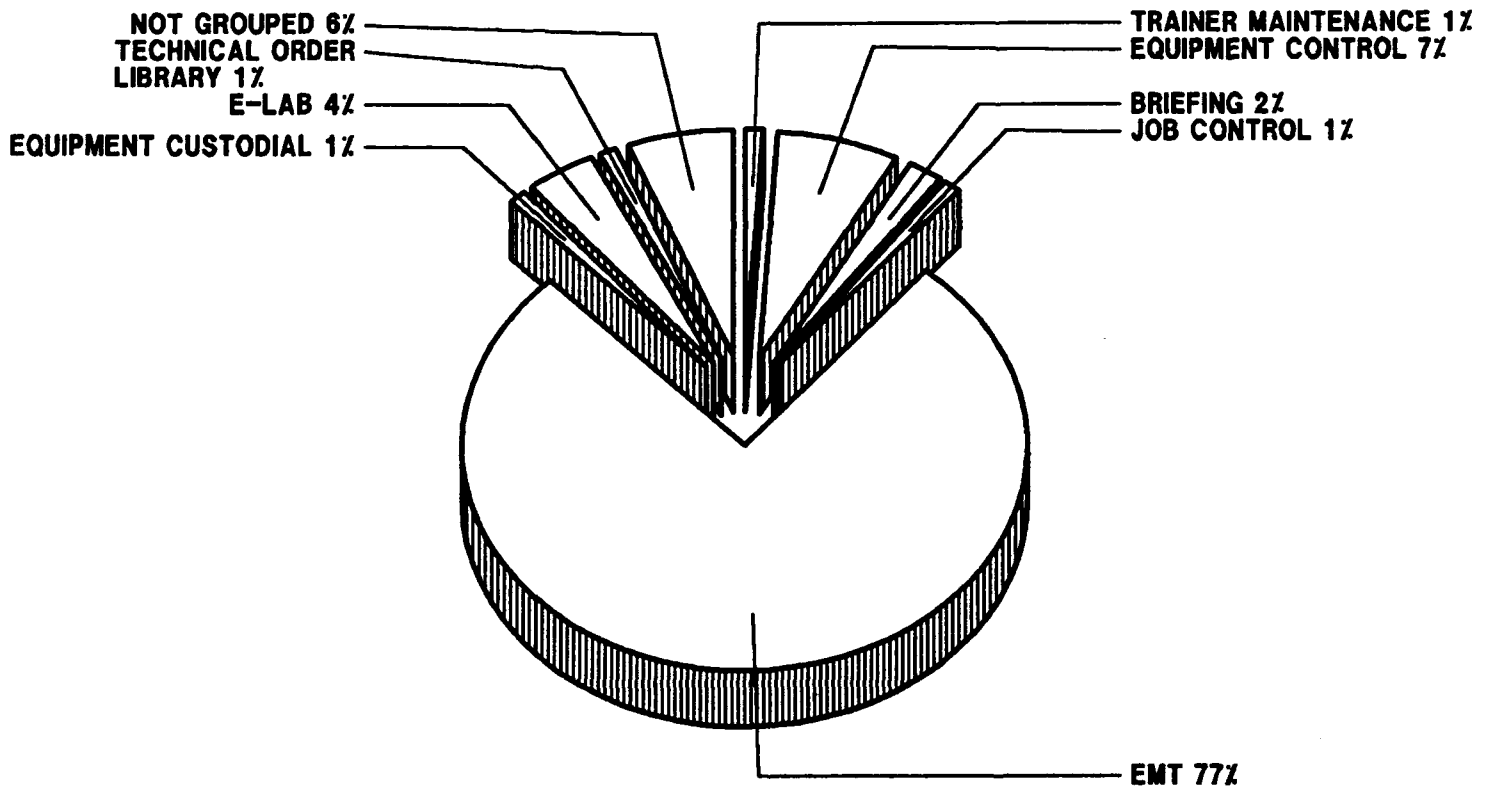


FIGURE 2

percentages performing, may warrant resident training. Those tasks receiving high task factor ratings, but low percentages performing, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for first-term personnel, but this decision must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To help in this determination, an Automated Training Indicator (ATI) is computed for each task in the inventory. ATI combines first-enlistment percent members performing with TE and TD data to compute training decisions based on ATCR 52-22, Atch 1. The computed ATI is numbered 1 to 18, with an 18 being the highest level of training indicated. An ATI of 7 or less leads to a training decision of OJT only. To illustrate how the ATI is computed, if a task has received high TE and TD ratings, and also has a high percentage of first-term members performing, then a high rating is assigned to the task. With a high ATI rating, strong recommendations can be made to emphasize training the task in a resident training course.

Tasks having the highest TE ratings are listed in Table 16. Included for each task are the percentage of first-job and first-enlistment personnel performing and the TD rating. As illustrated in Table 16, most of these tasks pertain to LF maintenance functions.

Table 17 lists the tasks having the highest TD ratings. The percentage of first-enlistment, 5-, and 7-skill level personnel performing, and TE rating are also included for each task. Although the tasks listed in Table 17 are of a technical nature, AFSC 411XOA personnel report spending less than 5 percent of their job time performing duties to which these tasks are related (see Table 7). In addition to this minimal percent time spent factor, most of these tasks have a low TE rating.

Various lists of tasks, accompanied by TE and TD ratings, are contained in the TRAINING EXTRACT package and should be reviewed in detail by technical school personnel. For a more detailed explanation of TE and TD ratings, see Task Factor Administration in the SURVEY METHODOLOGY section of this report.

### STS

A comprehensive review of STS 411XOA was made by comparing survey data to STS elements. Technical school personnel from the Chanute Training Center matched job inventory tasks to appropriate STS sections and subsections. A complete computer listing displaying the percent members performing tasks, TE and TD ratings for each task, along with the STS matchings, has been forwarded to the technical school for their further review of training documents. STS elements with performance objectives were reviewed for TE, TD, and percent members performing information, as stipulated in Air Training Command Regulation (ATCR) 52-22, dated February 1989. STS paragraphs containing general knowledge information, subject-matter knowledge requirements, or supervisory responsibilities were not reviewed. Typically, tasks which have sufficiently high TE and TD ratings, and are performed by at least 20 percent of personnel in appropriate experience or skill-level groups (such as first-

TABLE 16

TASKS WITH HIGHEST TRAINING EMPHASIS RATINGS

TASKS	TNG EMP	PERCENT MEMBERS PERFORMING			TSK DIFF
		1ST JOB	1ST ENL	1ST ENL	
H465 PERFORM AEROSPACE VEHICLE EQUIPMENT (AVE) STARTUPS USING CONTROL MONITORS (C-166B)	6.69	62	72	72	5.01
H474 PERFORM CHECKOUTS OF LF MOTOR GENERATORS	6.58	67	72	72	5.50
H475 PERFORM CHECKOUTS OF LF POWER SUPPLY GROUPS	6.50	62	73	73	5.37
H531 TROUBLESHOOT IZ SECURITY SYSTEMS	6.50	54	66	66	5.99
H535 TROUBLESHOOT LF MOTOR GENERATORS	6.50	59	66	66	5.89
H467 PERFORM CHECKOUTS OF IMPROVED MINUTEMAN PHYSICAL SECURITY SYSTEMS (IMPSS)	6.44	64	77	77	5.27
H530 TROUBLESHOOT IMPSS	6.40	59	74	74	5.79
H470 PERFORM CHECKOUTS OF LF DISTRIBUTION BOXES	6.38	51	63	63	7.01
H533 TROUBLESHOOT LF DISTRIBUTION BOXES	6.38	46	56	56	7.16
H536 TROUBLESHOOT LF POWER SUPPLY GROUPS	6.33	62	69	69	5.45
H488 PERFORM LF EMERGENCY SHUTDOWN PROCEDURES	6.31	67	70	70	4.15
F350 PERFORM OPERATIONAL GROUND EQUIPMENT (OGE)/OPERATIONAL SUPPORT EQUIPMENT (OSE) STARTUP OR SHUTDOWN PROCEDURES	6.29	62	72	72	4.79
H477 PERFORM CHECKOUTS OF MGS COOLING SYSTEMS	6.27	51	65	65	5.61
H476 PERFORM CHECKOUTS OF LF STORAGE BATTERIES	6.23	67	75	75	4.71
H489 PERFORM NORMAL MISSILE SHUTDOWN PROCEDURES	6.23	64	73	73	4.31
I555 PERFORM CHECKOUTS OF LCF MOTOR GENERATORS	6.19	59	62	62	5.76
H490 PERFORM POWER FAULT TO GROUND CHECKOUTS	6.15	64	69	69	6.17
H457 EVACUATE LFS FOR EWO LAUNCH CONDITIONS	6.13	62	65	65	3.99
H468 PERFORM CHECKOUTS OF INNER ZONE (IZ) SECURITY SYSTEMS	6.13	59	71	71	5.54
H519 REPLACE LF MOTOR GENERATORS	6.13	54	65	65	5.80
H453 CHANGE MISSILE COMMAND SIGNAL DECODER (CSD(M)) CODES	6.10	62	70	70	4.37
H538 TROUBLESHOOT MGS COOLING SYSTEMS	6.08	49	63	63	5.66
F358 READ OR INTERPRET WIRING OR SCHEMATIC DIAGRAMS	6.06	46	62	62	6.51

TE MEAN = 1.86 S.D. = 1.66 (High = 3.52)

TD MEAN = 5.00 S.D. = 1.00

TABLE 17

SAMPLE OF TASKS WITH HIGHEST TASK DIFFICULTY RATINGS

TASKS	TSK DIFF	PERCENT MEMBERS PERFORMING					TNG EMP
		1ST JOB	1ST ENL	41150A	41170A		
N682 DETERMINE MISSILE FLIGHT MALFUNCTIONS USING TELEMETRY DATA	8.27	0	0	1	3	.65	
P864 TROUBLESHOOT TYPE 1218 DIGITAL DATA COMPUTERS	7.78	0	0	4	0	1.00	
N680 ANALYZE MISSILE PERFORMANCE DATA DURING PRE-LAUNCH TESTS OR MISSILE FLIGHTS	7.57	0	0	1	4	.69	
N683 MONITOR INFLIGHT PERFORMANCE	7.39	0	0	0	3	.71	
N681 COMPILER INFLIGHT PERFORMANCE ANALYSIS DATA FOR TEST SUMMARY AND EVALUATION REPORTS (TSEB)	7.38	0	0	1	2	.69	
I560 PERFORM MOTOR GENERATOR COMPONENT ALIGNMENTS	7.38	33	40	22	3	4.75	
P866 TROUBLESHOOT WCPSS	7.33	3	2	10	2	1.25	
P814 TROUBLESHOOT AN/GSM-260 GUIDED MISSILE SYSTEMS TEST STATIONS	7.28	0	0	9	0	1.10	
O803 PROGRAM TYPE 1218 DIGITAL DATA COMPUTERS	7.27	0	0	3	0	.81	
P843 TROUBLESHOOT HCVE	7.26	0	0	9	1	.90	
Q882 ALIGN UHF RADIO RECEIVER COMPONENTS	7.18	0	1	9	2	1.00	
Q886 CALIBRATE AUTOMATIC TEST STATIONS (E-35) (NON-CORE)	7.17	0	1	12	2	1.02	
H533 TROUBLESHOOT LF DISTRIBUTION BOXES	7.16	46	56	32	12	6.38	
P811 TROUBLESHOOT AN/GSM-145 MAINTENANCE-GROUND-EQUIPMENT TEST SET COMPONENTS	7.16	0	0	4	0	1.00	
D156 DEVELOP INTERACTIVE COURSEWARE (ICW) FOR BALLISTIC MISSILE INSTRUCTIONAL SYSTEMS (BMIS)	7.12	0	0	1	2	.77	
H470 PERFORM CHECKOUTS OF LF DISTRIBUTION BOXES	7.01	51	63	34	10	6.38	
C112 PARTICIPATE IN PRELIMINARY, SYSTEM, OR CRITICAL DESIGN REVIEWS	6.99	0	1	7	21	.63	

TD MEAN = 5.00 S.D. = 1.00

TE MEAN = 1.86 S.D. = 1.66 (HIGH = 3.52)

TABLE 17 (CONTINUED)

SAMPLE OF TASKS WITH HIGHEST TASK DIFFICULTY RATINGS

TASKS	TSK DIFF	PERCENT MEMBERS PERFORMING				TNG EMP
		1ST JOB	1ST ENL	41150A	41170A	
P815 TROUBLESHOOT AN/GSM-315 AUTOMATIC TEST STATIONS (E-35)	6.99	3	2	13	3	1.35
Q876 ADJUST GUIDED-MISSILE SYSTEM TEST STATIONS	6.92	3	1	8	1	1.10
Q891 CALIBRATE GUIDED MISSILE SYSTEM TEST STATIONS	6.92	0	1	9	1	1.02
C124 PERFORM TECHNICAL ENGINEERING BRANCH (TEB) EVALUATIONS OF MAINTENANCE PROBLEMS	6.88	0	0	2	9	1.08
N699 PERFORM SYSTEMS FUNCTIONAL TESTS (SFT)	6.81	0	0	2	1	.98
A14 DRAFT BUDGET OR FINANCIAL REQUIREMENTS	6.76	0	1	3	18	1.02
O792 PERFORM CHECKOUTS OF UHF RADIO SUBSYSTEMS	6.76	3	1	10	2	.98
P828 TROUBLESHOOT CDB SIMULATOR SETS ELECTRICAL-FUNCTIONS- LAUNCH-CAPABILITY TEST SETS	6.72	0	0	1	1	.79

TD MEAN = 5.00 S.D. = 1.00

TE MEAN = 1.86 S.D. = 1.66 (HIGH = 3.52)

enlistment (1-48 months TAFMS) and 5- and 7-skill level groups), should be considered for inclusion in the STS. Likewise, tasks with less than 20 percent performing in all of these groups should be considered for deletion from the STS.

STS paragraphs containing performance information were reviewed. Approximately 175 line items on the STS were found to be unsupported by occupational survey data. A sample of these items is in Table 18, along with the accompanying job inventory task and survey data. Thirty-one percent of the unsupported items relate to paragraphs that deal specifically with WS-133A-M, WS-133B/CDB, and WS-118 weapon systems, and have tasks matched to them which are directly related to those systems. The other 69 percent of unsupported items deal primarily with STS paragraphs 43-Electronic Equipment Test Station (AN/GSM-315), Mobile Work Surface (MWS) (OQ-364/GSM-315), 45-Test Sets, 46-Coding Equipment, 47-Support Equipment, and 48-Operational Ground Equipment (OGE). Training personnel and SMEs should review these areas to determine if inclusion in future revisions to the STS is warranted.

Tasks not matched to any element of the STS are listed at the end of the STS computer listing. These were reviewed to determine if there were any tasks concentrated around any particular functions or jobs. There were 565 tasks not referenced to the STS. One hundred forty-eight unreferenced tasks are managerial or supervisory in nature and are not normally matched to an STS. Examples of technical tasks performed by at least 20 percent of STS target group respondents, but which are not referenced to any STS element, are displayed in Table 19. Training personnel and SMEs should review these and other unreferenced tasks to determine STS inclusion.

It should be noted that at the time the STS match was being performed, the document was undergoing a revision. This revision took into account the fact that all Minuteman II ICBMs were off alert status and scheduled to be purged from the U.S. inventory of nuclear weapons. In order to obtain an accurate match, a draft of the tentative STS was used in the matching process.

#### POI

Job inventory tasks were matched to related training objectives in POI C3ABR41130A-002, dated 28 January 1992, with assistance from technical school subject-matter experts. The method employed was similar to that of the STS analysis. The data examined included percent members performing data for first-enlistment (1-48 months TAFMS) personnel, and TE and TD ratings. ATI ratings for each task were also used.

POI blocks, units of instruction, and learning objectives were compared to the standard set forth in Attachment 1, APCR 52-22, dated 17 February 1989 (30 percent or more of the criterion first-enlistment group performing tasks trained, along with sufficiently high TE and TD ratings on those tasks). By this guidance, tasks trained in the course which do not meet these criteria should be considered for elimination from the formal course, if not justified on some other acceptable basis.

TABLE 18

EXAMPLES OF STS ITEMS NOT SUPPORTED BY OSR DATA

<u>STS REFERENCE/TASKS</u>	3LVL COURSE PROF CODE	TNG EMP*	<u>PERCENT MEMBERS PERFORMING</u>				TSK DIF**
			1ST ENL (N=140)	5-SKILL LEVEL (N=340)	7-SKILL LEVEL (N=188)		
23b(1). Generate case data image tape	2b	2.73	16	14	4	4.99	
F319 Generate memory controller group (MCG) case data image tapes							
45b(2)(a). Check out MCG test set (AN/GSM-234)	-	1.08	1	11	2	5.75	
0732 Perform checkouts of AN/GSM-234 MCG test set components							
46a(1). Perform on-line diagnostics of hardware certification verification equipment (HCVE)	-	.90	1	9	1	5.98	
0769 Perform checkouts of HCVE							
47a(11). Perform waveform checkout of guidance set cooler test bench (A/E-47T-23)	-	.98	1	10	1	5.59	
0802 Perform waveform checkouts of guidance set cooler test benches							
47a(13)(a). Perform self-test of magnetic tape transport (C-631A)	-	1.40	7	16	1	4.56	
0746 Perform checkouts of C-631A cartridge tape units (CTU)							

\* Training Emphasis has an average of 1.86 and a Standard Deviation of 1.66 (High TE = 3.52)

\*\* Average Task Difficulty is 5.00, and the Standard Deviation is 1.00

TABLE 19

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 20 PERCENT OR MORE 411XOA GROUP MEMBERS AND NOT REFERENCED TO THE STS

TASKS	PERCENT MEMBERS PERFORMING			TNG EMP*	TASK DIF**
	1ST ENL (N=140)	DAFSC 41150A (N=340)	DAFSC 41170A (N=188)		
F322 INSPECT FOR CORROSION	71	51	16	3.71	3.37
F324 INSPECT MAINTENANCE VEHICLE HOISTS	61	34	7	4.00	3.91
F330 INSTALL TEST EQUIPMENT	59	41	12	3.79	4.42
F340 PERFORM CHECKOUTS OF INTERFACE CABLES	40	30	11	4.13	4.77
F344 PERFORM COLORIMETRIC TESTS	39	21	4	3.56	3.55
F358 READ OR INTERPRET WIRING OR SCHEMATIC DIAGRAMS	62	52	28	6.06	6.51
H452 ALIGN TELESCOPING LADDERS	69	34	4	5.44	5.51
H480 PERFORM CHECKOUTS OF SECURITY SYSTEM ELECTRONIC SURGE ARRESTERS (ESAs)	62	28	6	4.83	5.55
H484 PERFORM HOSTILE ACT, SECURE LAUNCHER PROCEDURES	40	23	3	3.71	4.28
H510 REPAIR SECURITY SYSTEM ESAs	44	22	5	4.46	5.24
H514 REPLACE ELECTRICAL FILTER ASSEMBLIES (EFAs)	47	25	5	4.06	5.27
H540 TROUBLESHOOT PROGRAMMER GROUPS	61	35	1	5.35	5.43
I552 PERFORM CHECKOUTS OF LCF EFAS	46	22	3	4.29	5.91
I560 PERFORM MOTOR GENERATOR COMPONENT ALIGNMENTS	40	22	3	4.75	7.38
I575 REPLACE LCF BATTERY CHARGER SETS	49	30	5	5.10	4.85
I576 REPLACE LCF EFAs	43	20	2	3.96	5.34
I588 TROUBLESHOOT LCF DISTRIBUTION BOXES	44	28	6	5.00	5.43
I589 TROUBLESHOOT LCF INTERCONNECTING BOXES	49	29	10	4.83	5.24

\* Training emphasis has an average of 1.86 and a standard deviation of 1.66 (High TE=3.52)

\*\* Average TD rating is 5.00, and the standard deviation is 1.00

Review of the tasks matched to the POI reveals that 35 learning objectives are not supported by OSR data for matched tasks. A sample of these objectives is in Table 20, along with the accompanying job inventory task and survey data. Seventy-seven percent of the unsupported learning objectives are related to blocks which focus specifically on Peacekeeper (WS-118) and Minuteman III (WS-133B/CDB) systems. The remaining 23 percent of unsupported items deal primarily with blocks 4-Personnel Access and Security Systems, 6-Launch Control Facility (A-M/CDB), 7-Launch Facility (A-M/CDB), and 8-Intra-site Cabling System (A-M/CDB). A comparison of the unsupported learning objectives to their respective STS line item references reveals a strong similarity between tasks matched to the unsupported areas in both documents.

Many technical tasks performed by over 30 percent of first-enlistment personnel were not matched to the POI. Examples of these tasks with survey data are listed in Table 21. In addition to many members performing these functions, several of these tasks are rated high in TE and TD. Training personnel and SMEs should review these and other unreferenced tasks to determine if training should be provided in the formal course.

#### JOB SATISFACTION ANALYSIS

An examination of job satisfaction indicators can give career ladder managers a better understanding of factors that may affect the job performance of career ladder airmen. Therefore, the survey booklet included attitude questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions. The responses of the current survey sample were then analyzed by making several comparisons: (1) among TAFMS groups of the AFSC 411XOA career ladder and a comparative sample of personnel from other Mission Equipment Maintenance career ladders surveyed in 1991 (AFSCs 452X2A/B/C, 454X1, 456X1A/B, 457X3A/B/C, 465X0), (2) between current and previous survey TAFMS groups, and (3) across specialty groups identified in the SPECIALTY JOBS section of the report.

Table 22 compares first-enlistment (1-48 months TAFMS), second-enlistment (49-96 months TAFMS), and career (97+ months TAFMS) group data to corresponding enlistment groups from other Mission Equipment Maintenance AFSCs surveyed during the previous calendar year. These data give a relative measure of how the job satisfaction of AFSC 411XOA personnel compares with similar Air Force specialties. Missile Systems Maintenance personnel reported generally higher job satisfaction than members of the comparative sample. The first-enlistment AFSC 411XOA group, however, rated their job interest and perceived use of talents lower than their counterparts. In addition, the career group rated their perceived use of training lower than that of the comparative sample career group. Overall, satisfaction for all three TAFMS groups is still relatively high. The percentages of positive responses in these comparisons reflect a career ladder where personnel appear to be quite satisfied with their jobs.

TABLE 20

EXAMPLES OF POI OBJECTIVES NOT SUPPORTED BY OSR DATA

POI OBJECTIVES/TASKS	TNG EMP*	PERCENT MEMBERS PERFORMING		TSK DIF**
		1ST JOB (N=39)	1ST ENL (N=140)	
IV 2g. Using technical data and the Alarm Set Maintenance Trainer, as a team member, replace circuit breakerCB-1 with no more than one major error.				
T948 Remove or install electrical plug or snap-in components, such as bulbs, fuses, or circuit breakers	1.38	26	27	2 3.21
-----				
VI 3f. Using technical data, training equipment, and the QD trainer, as a team member, perform Launch Control Facility generation of case data image tape with no more than three major errors.				
F319 Generate memory controller group (MCG) case data image tapes	2.73	13	16	7 4.99
-----				
VII 2j. Using technical data, training equipment, and the QD trainer, as a team member, perform UHF Radio Receiver repair with no more than one major error.				
F379 Repair UHF command radio receivers	2.52	26	29	7 4.81
-----				

\* Training Emphasis has an average of 1.86 and a Standard Deviation of 1.66 (High TE = 3.52)

\*\* Average Task Difficulty is 5.00, and the Standard Deviation is 1.00

TABLE 20 (CONTINUED)

EXAMPLES OF POI OBJECTIVES NOT SUPPORTED BY OSR DATA

POI OBJECTIVES/TASKS	TNG EMP*	PERCENT MEMBERS PERFORMING			ATI	TSK DIF**
		1ST JOB (N=39)	1ST ENL (N=140)			
VIII 3a. Using technical data, a simulated technical order deficiency, and an AFTO Form 22, Technical Order System Publication Improvement Report, prepare the AFTO Form 22 with no more than three errors.						
E245 Initiate or annotate AFTO Forms 22 (Technical Order System Publication Improvement Report and Reply)	3.44	21	24	7	4.75	

\* Training Emphasis has an average of 1.86 and a Standard Deviation of 1.66 (High TE = 3.52)  
 \*\* Average Task Difficulty is 5.00, and the Standard Deviation is 1.00

TABLE 21

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 30 PERCENT OR MORE  
411X0A FIRST-ENLISTMENT PERSONNEL AND NOT REFERENCED TO THE POI

TASKS	TNG EMP*	1ST ENL PERCENT MEMBERS PERFORMING (N=140)	ATI	TSK DIF**
F328 INSPECT OR OPERATE EMERGENCY BREATHING APPARATUS	4.90	69	18	4.40
F342 PERFORM CHECKOUTS OF POWER SIGNAL DISTRIBUTION UNITS (PSDU)	4.90	51	18	6.64
F351 PERFORM OPERATOR INSPECTIONS ON MAINTENANCE VEHICLES	4.17	72	18	3.31
F354 PERFORM PROCEDURES TO ISOLATE OR RESTORE LF AND LCF COMMUNICATIONS	4.35	64	18	4.58
F371 REMOVE OR INSTALL RADIO FREQUENCY INTERFERENCE (RFI) SHIELD GASKETS	5.19	75	18	4.70
F380 REPLACE HAND-DRIVEN LINEAR ACTUATORS	3.98	54	18	3.46
H452 ALIGN TELESCOPING LADDERS	5.44	69	18	5.51
H459 INSPECT TELESCOPING LADDERS	5.38	78	18	3.94
H467 PERFORM CHECKOUTS OF IMPROVED MINUTEMAN PHYSICAL SECURITY SYSTEMS (IMPSS)	6.44	77	18	5.27
H468 PERFORM CHECKOUTS OF INNER ZONE (IZ) SECURITY SYSTEMS	6.13	71	18	5.54
H519 REPLACE LF MOTOR GENERATORS	6.13	65	18	5.80
H535 TROUBLESHOOT LF MOTOR GENERATORS	6.50	66	18	5.89
I546 ISOLATE OR DEISOLATE LCF INTERCONNECTING BOXES	4.96	61	18	4.53
I554 PERFORM CHECKOUTS OF LCF INTERCONNECTING BOXES	4.92	51	18	5.13
I563 REMOVE OR INSTALL PORTABLE INERTIAL PERFORMANCE DATA (IPD) PROCESSOR UNITS	4.31	55	18	4.54
I579 REPLACE LCF MOTOR GENERATORS	5.92	58	18	6.70
I580 REPLACE LCF STORAGE BATTERIES	6.00	66	18	6.33
I590 TROUBLESHOOT LCF MOTOR GENERATORS	5.92	59	18	5.86

\* Training Emphasis has an average of 1.86 and a standard deviation of 1.66 (High TE=3.52)

\*\* Average TD rating is 5.00, and the standard deviation is 1.00

TABLE 22

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 411X0A TAFMS GROUPS IN CURRENT STUDY TO A COMPARATIVE SAMPLE (PERCENT MEMBERS RESPONDING)

	<u>1-48 MONTHS TAFMS</u>		<u>49-96 MONTHS TAFMS</u>		<u>97+ MONTHS TAFMS</u>	
	411X0A (N=140)	COMP SAMPLE (N=2,230)	411X0A (N=169)	COMP SAMPLE (N=1,441)	411X0A (N=308)	COMP SAMPLE (N=2,756)
<u>EXPRESSED JOB INTEREST</u>						
INTERESTING	70	72	73	71	79	73
SO-SO	15	17	15	17	11	15
DULL	15	11	11	12	10	12
<u>PERCEIVED USE OF TALENTS</u>						
FAIRLY WELL TO PERFECT	70	79	78	77	82	79
NONE TO VERY LITTLE	29	20	22	23	18	21
<u>PERCEIVED USE OF TRAINING</u>						
FAIRLY WELL TO PERFECT	88	80	78	74	69	74
NONE TO VERY LITTLE	11	20	21	26	30	26
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>						
SATISFIED	74	72	76	69	73	70
NEUTRAL	9	13	9	12	10	11
DISSATISFIED	16	14	15	18	17	19
<u>REENLISTMENT INTENTIONS</u>						
YES OR PROBABLY YES	60	58	73	68	79	75
NO OR PROBABLY NO	38	41	27	31	4	12
WILL RETIRE	1	*	0	*	16	13

\* Denotes less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding or nonresponse  
Comparative data are from AFSCs 452X2A/B/C, 454X1, 456X1A/B, 457X3A/B/C, and 465X0 surveyed in 1991

An indication of changes in job satisfaction perceptions within the career ladder is provided in Table 23 which presents TAFMS group data for 1991 survey respondents, and data from respondents to the last OSRs of the career ladder in 1985 (316X0G) and 1986 (316X2G). Generally, perceptions associated with job satisfaction have improved for all TAFMS groups when compared to the 316X0G sample. However, when compared to the 316X2G sample, a slight decrease in job satisfaction is noted. The decrease is most evident among first-enlistment personnel and includes all areas except reenlistment intentions. Second-term personnel show a decrease in perceived use of training, while career group personnel show decreases in job interest, perceived use of talents, and perceived use of training. Overall, job satisfaction has increased since the merger of the 316X0G and 316X2G career ladders.

Table 24 presents job satisfaction data for the major jobs identified in the career ladder structure for AFSC 411X0A. An examination of these data can reveal the influences of performing certain jobs on overall job satisfaction. Job satisfaction indicators for the specialty job groups suggest that members of the Trainer Maintenance and Instructor groups are most satisfied. Only four of the seventeen specialty job groups indicated a low degree of satisfaction. These groups include ISD Personnel, Equipment Controllers, Briefers, and the least satisfied group, Technical Order Librarians. It should be noted that these four groups constitute less than 4 percent of the total survey sample.

## IMPLICATIONS

As explained in the INTRODUCTION, this survey was conducted primarily to provide training personnel with current information on the Missile Systems Maintenance career ladder for use in reviewing current training programs and training documents. The data compiled from this survey support the current structure of the AFSC 411X0A career ladder. The present classification structure, as described by the AFR 39-1 Specialty Descriptions, accurately portrays the jobs in this study.

Analysis of career ladder documents indicates both the STS and POI contain a number of unsupported line items and learning objectives. The unsupported areas in both documents appear to be closely related and should be reviewed to determine if their inclusion in future revisions of these documents is warranted.

No serious job satisfaction problems appear to exist within this specialty. Overall, job satisfaction responses were almost all higher than those of a comparative sample of similar Air Force personnel surveyed in 1991.

The findings of this OSR come directly from the survey data collected from Missile Systems Maintenance personnel nationwide. These data are readily available to training and utilization personnel, functional managers, and other interested parties having a need for such information. Much of the data are compiled into extracts which are excellent tools in the decision-making process. These data extracts should be used when training or utilization decisions are made.

TABLE 23

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 411X0A TAFMS GROUPS IN CURRENT STUDY TO PREVIOUS STUDY (PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS		
	411X0A (N=140)	316X0G (N=424)	411X0A (N=169)	316X0G (N=150)	411X0A (N=308)	316X0G (N=227)	316X2G (N=29)
<u>EXPRESSED JOB INTEREST</u>							
INTERESTING	70	62	73	70	79	78	83
SO-SO	15	23	15	20	11	11	10
DULL	15	14	11	9	10	11	7
<u>PERCEIVED USE OF TALENTS</u>							
FAIRLY WELL TO PERFECT	70	72	78	75	82	82	86
NONE TO VERY LITTLE	29	28	22	23	18	18	10
<u>PERCEIVED USE OF TRAINING</u>							
FAIRLY WELL TO PERFECT	88	81	78	68	69	68	72
NONE TO VERY LITTLE	11	19	21	31	30	32	28
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>							
SATISFIED	74	64	76	66	73	75	62
NEUTRAL	9	17	9	17	10	7	3
DISSATISFIED	16	19	15	17	17	18	35
<u>REENLISTMENT INTENTIONS</u>							
YES OR PROBABLY YES	60	51	73	67	79	77	62
NO OR PROBABLY NO	38	46	27	32	4	8	14
WILL RETIRE	1	*	0	*	16	14	24

\* Denotes less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding or nonresponse

TABLE 24

JOB SATISFACTION INDICATORS FOR AFSC 411X0A JOBS  
(PERCENT MEMBERS RESPONDING)\*

	ELECTRO- MECHANICAL TEAM (N=212)	ELECTRONIC LAB (N=53)	SUPERVISORY (N=99)	JOB CONTROL (N=25)	EMDAS COMPUTER OPERATION (N=18)	MAINTENANCE PLANNING- SCHEDULING (N=10)
<u>EXPRESSED JOB INTEREST</u>						
INTERESTING	76	74	86	80	94	90
SO-SO	14	17	9	12	0	10
DULL	10	9	5	8	6	0
<u>PERCEIVED USE OF TALENTS</u>						
FAIRLY WELL TO PERFECT	76	89	87	88	83	90
NONE TO VERY LITTLE	23	11	13	12	17	10
<u>PERCEIVED USE OF TRAINING</u>						
FAIRLY WELL TO PERFECT	94	91	67	96	33	70
NONE TO VERY LITTLE	5	9	33	4	67	30
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>						
SATISFIED	77	79	78	72	72	90
NEUTRAL	11	6	7	12	11	0
DISSATISFIED	11	15	15	16	17	10
<u>REENLISTMENT INTENTIONS</u>						
YES OR PROBABLY YES	69	73	73	84	83	90
NO OR PROBABLY NO	30	25	3	12	0	10
WILL RETIRE	0	2	24	4	17	0

\* Columns may not add to 100 percent due to rounding or nonresponse

TABLE 24 (CONTINUED)

JOB SATISFACTION INDICATORS FOR AFSC 411X0A JOBS  
(PERCENT MEMBERS RESPONDING)\*

	QA INSPECTION- SCHEDULING (N=10)	EQUIPMENT CONTROL (N=7)	BRIEFING (N=8)	TRAINER MAINTENANCE (N=6)	ISD (N=6)	TECHNICAL COURSE INSTRUCTION (N=6)
<u>EXPRESSED JOB INTEREST</u>						
INTERESTING	80	43	13	83	33	100
SO-SO	7	29	38	17	50	0
DULL	7	29	50	0	17	0
<u>PERCEIVED USE OF TALENTS</u>						
FAIRLY WELL TO PERFECT	87	43	38	100	50	100
NONE TO VERY LITTLE	13	57	63	0	50	0
<u>PERCEIVED USE OF TRAINING</u>						
FAIRLY WELL TO PERFECT	93	29	25	83	33	100
NONE TO VERY LITTLE	7	71	75	17	67	0
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>						
SATISFIED	87	43	49	100	66	66
NEUTRAL	0	0	13	0	17	17
DISSATISFIED	13	57	38	0	17	17
<u>REENLISTMENT INTENTIONS</u>						
YES OR PROBABLY YES	93	57	63	100	66	100
NO OR PROBABLY NO	0	43	38	0	17	0
WILL RETIRE	7	0	0	0	17	0

\* Columns may not add to 100 percent due to rounding or nonresponse

TABLE 24 (CONTINUED)

JOB SATISFACTION INDICATORS FOR AFSC 411X0A JOBS  
(PERCENT MEMBERS RESPONDING)\*

	TECHNICAL ENGINEERING TEAM (N=5)	TECHNICAL ORDER LIBRARY (N=5)	EQUIPMENT CUSTODIAL (N=5)	MISSILE LAUNCH ANALYSIS (N=5)	PROGRAM MANAGEMENT (N=6)
<u>EXPRESSED JOB INTEREST</u>					
INTERESTING	80	20	80	100	100
SO-SO	0	0	0	0	0
DULL	20	80	20	0	0
<u>PERCEIVED USE OF TALENTS</u>					
FAIRLY WELL TO PERFECT	80	20	80	100	80
NONE TO VERY LITTLE	20	80	20	0	20
<u>PERCEIVED USE OF TRAINING</u>					
FAIRLY WELL TO PERFECT	60	20	60	60	80
NONE TO VERY LITTLE	40	80	40	40	20
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>					
SATISFIED	80	20	80	100	100
NEUTRAL	20	0	0	0	0
DISSATISFIED	0	80	20	0	0
<u>REENLISTMENT INTENTIONS</u>					
YES OR PROBABLY YES	80	100	80	80	80
NO OR PROBABLY NO	0	0	20	0	0
WILL RETIRE	20	0	0	20	20

\* Columns may not add to 100 percent due to rounding or nonresponse

**APPENDIX A**  
**SELECTED REPRESENTATIVE TASKS PERFORMED BY**  
**MEMBERS OF CAREER LADDER JOBS**

TABLE A1  
ELECTROMECHANICAL TEAM (EMT) CLUSTER  
(STG119)

NUMBER IN CLUSTER: 212  
PERCENTAGE OF TOTAL SAMPLE: 34%

AVERAGE TICF: 50 MONTHS

TASKS	PERCENT MEMBERS PERFORMING
H456 ENTER LF <sub>s</sub>	99
H458 EXIT LF <sub>s</sub>	99
H493 RAISE OR LOWER EQUIPMENT INTO OR FROM LF <sub>s</sub>	98
H476 PERFORM CHECKOUTS OF LF STORAGE BATTERIES	97
F391 TIGHTEN BOLTS OR NUTS TO SPECIFIED TORQUE VALUES	96
H459 INSPECT TELESCOPING LADDERS	96
H475 PERFORM CHECKOUTS OF LF POWER SUPPLY GROUPS	95
F350 PERFORM OPERATIONAL GROUND EQUIPMENT (OGE)/OPERATIONAL SUPPORT EQUIPMENT (OSE) STARTUP OR SHUTDOWN PROCEDURES	94
H462 ISOLATE LF FAULTS	94
I594 UNLOAD AND SHUTDOWN LCC MOTOR GENERATORS	94
H522 REPLACE SECURITY SYSTEM DRAWERS	94
F339 PERFORM CHECKOUTS OF BATTERIES	93
H520 REPLACE LF STORAGE BATTERIES	93
H469 PERFORM CHECKOUTS OF LF BATTERY CHARGER SETS	93
H467 PERFORM CHECKOUTS OF IMPROVED MINUTEMAN PHYSICAL SECURITY SYSTEMS (IMPSS)	93
H454 CHANGE SECONDARY DOOR LOCK COMBINATIONS	93
H488 PERFORM LF EMERGENCY SHUTDOWN PROCEDURES	92
H489 PERFORM NORMAL MISSILE SHUTDOWN PROCEDURES	92
F365 REMOVE OR INSTALL ELECTRONIC EQUIPMENT DRAWERS	91
H530 TROUBLESHOOT IMPSS <sub>s</sub>	91
H542 TROUBLESHOOT SECURITY PIT VAULT DOORS	91
H506 REPAIR SECURITY PIT VAULT DOORS	91
H474 PERFORM CHECKOUTS OF LF MOTOR GENERATORS	91

TABLE A2

TECHNICAL ENGINEERING TEAM IJT  
(STG186)

NUMBER IN JOB: 5  
PERCENTAGE OF TOTAL SAMPLE: 1%

AVERAGE TICF: 149 MONTHS

TASKS	PERCENT MEMBERS PERFORMING
F358 READ OR INTERPRET WIRING OR SCHEMATIC DIAGRAMS	100
C124 PERFORM TECHNICAL ENGINEERING BRANCH (TEB) EVALUATIONS OF MAINTENANCE PROBLEMS	100
I545 ISOLATE LCF FAULTS	100
F341 PERFORM CHECKOUTS OF INTRASITE CABLES	100
H486 PERFORM LF COMMAND LINE TONE CHECKOUTS	100
H470 PERFORM CHECKOUTS OF LF DISTRIBUTION BOXES	100
I559 PERFORM LCF COMMAND LINE TONE CHECKOUTS	100
H475 PERFORM CHECKOUTS OF PROGRAMMER GROUPS	100
F342 PERFORM CHECKOUTS OF POWER SIGNAL DISTRIBUTION UNITS (PSDU)	100
H534 TROUBLESHOOT LF INTERCONNECTING BOXES	100
H473 PERFORM CHECKOUTS OF LF INTERCONNECTING BOXES	100
H498 REPAIR LF DISTRIBUTION BOXES	100
H533 TROUBLESHOOT LF DISTRIBUTION BOXES	100
H540 TROUBLESHOOT PROGRAMMER GROUPS	100
H536 TROUBLESHOOT LF POWER SUPPLY GROUPS	100
I589 TROUBLESHOOT LCF INTERCONNECTING BOXES	100
I566 REPAIR DIGITAL DATA GROUPS (DDG)	100
H472 PERFORM CHECKOUTS OF LF ELECTRONIC SURGE ARRESTORS (ESA)	100
F343 PERFORM CHECKOUTS OF ULTRAHIGH FREQUENCY (UHF) COMMAND RADIO SYSTEMS	100
H535 TROUBLESHOOT LF MOTOR GENERATORS	100
H490 PERFORM POWER FAULT TO GROUND CHECKOUTS	100
H477 PERFORM CHECKOUTS OF MGS COOLING SYSTEMS	100

TABLE A3  
ELECTRONIC LABORATORY (E-LAB) CLUSTER  
(STG154)

NUMBER IN CLUSTER: 53  
PERCENTAGE OF TOTAL SAMPLE: 9%

AVERAGE TICF: 78 MONTHS

TASKS	PERCENT MEMBERS PERFORMING
0746 PERFORM CHECKOUTS OF C-631A CARTRIDGE TAPE UNITS (CTU)	100
0745 PERFORM CHECKOUTS OF C-166B CONTROL MONITORS	100
P825 TROUBLESHOOT C-166B CONTROL MONITORS	100
0774 PERFORM CHECKOUTS OF MINUTEMAN POWER PROCESSOR VERIFICATION BOXES (MPPVB)/POWER SYSTEM VERIFICATION BOXES (PSVB)	100
T951 REMOVE OR INSTALL INTEGRATED CIRCUIT CARDS OF PRINTED CIRCUIT ASSEMBLIES	98
Q888 CALIBRATE C-166B CONTROL MONITORS	98
P851 TROUBLESHOOT MPPVBs/PSVBs	98
F310 CLEAN ELECTRONIC EQUIPMENT	96
P850 TROUBLESHOOT MPPs	96
T933 INSTALL SOLDERLESS CONNECTORS	96
0716 INSPECT AN/GSM-315 AUTOMATIC TEST STATIONS (E-35)	94
0736 PERFORM CHECKOUTS OF AN/GSM-316 STATIONS (E-35)	94
T948 REMOVE OR INSTALL ELECTRICAL PLUG OR SNAP-IN COMPONENTS, SUCH AS BULBS, FUSES, OR CIRCUIT BREAKERS	94
0720 INSPECT MGSs	94
0775 PERFORM CHECKOUTS OF MINUTEMAN POWER PROCESSORS (MPP)	94
F313 CLEAN READ-WRITE-ERASE HEADS	94
P824 TROUBLESHOOT C-164 TAPE TRANSPORTS	94
F389 SWEEP, MOP, WAX, BUFF, OR VACUUM FLOORS	92
F308 CLEAN AIR FILTERS	92
Q890 CALIBRATE CODE CHANGE-VERIFIER SETS	92
T969 SOLDER ELECTRICAL CONNECTIONS	92
0744 PERFORM CHECKOUTS OF C-164 TAPE TRANSPORTS	92

TABLE A4  
EQUIPMENT CONTROL IJT  
(STG126)

NUMBER IN JOB: 7  
PERCENTAGE OF TOTAL SAMPLE: 1%

AVERAGE TICF: 32 MONTHS

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
E253 ISSUE SUPPLIES AND EQUIPMENT	100
E208 COMPLETE AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	85
F327 INSPECT OR INSTALL SAFETY DEVICES, SUCH AS SAFETY BARRIERS, LANYARDS, OR PERSONNEL HARNESSSES	85
E251 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	85
F323 INSPECT HOISTING UNITS, SLINGS, OR ADAPTERS	85
F328 INSPECT OR OPERATE EMERGENCY BREATHING APPARATUS	85
F386 STENCIL, DECAL, OR PAINT INSTRUCTIONS OR IDENTIFIERS ON EQUIPMENT	85
E247 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	71
F337 PAINT TOOLS OR EQUIPMENT	71
C110 INSPECT PROTECTIVE EQUIPMENT	57
F322 INSPECT FOR CORROSION	57
F332 LOAD PAPER OR RIBBONS ON PRINTER EQUIPMENT	57

TABLE A5  
 TECHNICAL ORDER LIBRARY IJT  
 (STG173)

NUMBER IN JOB: 5  
 PERCENTAGE OF TOTAL SAMPLE: 1%

AVERAGE TICF: 43 MONTHS

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
E280 MAINTAIN TECHNICAL ORDERS (TO)	100
F389 SWEEP, MOP, WAX, BUFF, AND VACUUM FLOORS	80
E251 INVENTORY TOOLS, EQUIPMENT, OR SUPPLIES	60
E235 ISSUE SUPPLIES AND EQUIPMENT	60
F386 STENCIL, DECAL, OR PAINT INSTRUCTIONS OR IDENTIFIERS ON EQUIPMENT	60
E277 MAINTAIN PUBLICATION LIBRARIES	40
E267 MAINTAIN FILES OF UNCLASSIFIED MATERIAL OR MESSAGES	40
E208 COMPLETE AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	40
E255 LOCATE INFORMAITON IN SAC CEMs	40

TABLE A6  
BRIEFING IJT  
(STG116)

NUMBER IN JOB: 8  
PERCENTAGE OF TOTAL SAMPLE: 1%

AVERAGE TICF: 64 MONTHS

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
E252 ISSUE JOB CONTROL NUMBERS	100
E220 COMPLETE AFTO FORMS 349-3 (MAINTENANCE DATA COLLECTION RECORD (AUTOMATED))	87
E209 COMPLETE AF FORMS 2005 (ISSUE/TURN-IN REQUEST)	87
E246 INITIATE OR COMPLETE AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	87
E247 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	75
C129 REVIEW MDC FORMS	62
E289 PREPARE WORKORDERS	62
B42 CONDUCT PREDISPATCH MAINTENANCE BRIEFINGS	62
E295 REVIEW WORKORDER REQUESTS	50
F332 LOAD PAPER OR RIBBONS ON PRINTER EQUIPMENT	50

TABLE A7

JOB CONTROL IJT  
(STG113)

NUMBER IN JOB: 25  
PERCENTAGE OF TOTAL SAMPLE: 4%

AVERAGE TICF: 97 MONTHS

TASKS	PERCENT MEMBERS PERFORMING
E252 ISSUE JOB CONTROL NUMBERS	100
B38 ADJUST DAILY MAINTENANCE PLANS TO MEET OPERATIONAL COMMITMENTS	96
A4 COORDINATE WORK WITH OTHER SECTIONS	88
B60 IMPLEMENT EWO PROCEDURES	80
E269 MAINTAIN MAINTENANCE LOGS	72
B56 DISPATCH MAINTENANCE TECHNICIANS TO WORK AREAS	72
E256 LOCATE INFORMATION IN TECHNICAL, STANDARD, OR SUPPLY PUBLICATIONS	72
E197 ANNOTATE SAF FORMS 799 (PRE-DISPATCH NOTIFICATION)	72
A3 COORDINATE ACTIVITIES OF SPECIALISTS	68
E261 MAINTAIN CLASSIFIED MATERIAL OF MESSAGE FILES	64
A37 SCHEDULE WORK ASSIGNMENTS AND PRIORITIES	64
E289 PREPARE WORKORDERS	64
B50 DIRECT MAINTENANCE OF EQUIPMENT, SUPPLIES, OR WORKSPACE	60
E246 INITIATE OR COMPLETE AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	60

TABLE A8

MAINTENANCE PLANNING-SCHEDULING IJT  
(STG136)

NUMBER IN JOB: 10  
PERCENTAGE OF TOTAL SAMPLE: 2%

AVERAGE TICF: 88 MONTHS

TASKS	PERCENT MEMBERS PERFORMING
A26 PLAN OR PREPARE BRIEFINGS	100
A23 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	100
B38 ADJUST DAILY MAINTENANCE PLANS TO MEET OPERATIONAL COMMITMENTS	90
A36 SCHEDULE USE OF EQUIPMENT OR VEHICLES	90
B41 CONDUCT BRIEFINGS	90
A8 DEVELOP EQUIPMENT UTILIZATION OR MAINTENANCE SCHEDULES	80
A34 SCHEDULE MISSILE MAINTENANCE INSPECTIONS	80
A37 SCHEDULE WORK ASSIGNMENTS AND PRIORITIES	70
A4 COORDIANTE WORK WITH OTHER SECTIONS	70
A24 PLAN EMERGENCY WAR ORDER (EWO) PROCEDURES	70
A3 COORDINATE ACTIVITIES OF SPECIALISTS	60
A32 SCHEDULE EQUIPMENT OR FACILITY INSPECTIONS	60
B60 IMPLEMENT EWO PROCEDURES	60

TABLE A9  
EQUIPMENT CUSTODIAL IJT  
(STG106)

NUMBER IN JOB: 5  
PERCENTAGE OF TOTAL SAMPLE: 1%

AVERAGE TICF: 100 MONTHS

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
E235 COORDINATE ON OBTAINING PARTS WITH BASE SUPPLY	100
E251 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	100
E209 COMPLETE AF FORMS 2005 (ISSUE/TURN-IN REQUEST)	100
E226 COMPLETE DD FORMS 1348-6 (DOD SINGLE LINE ITEM REQUISITION SYSTEM DOCUMENT)	100
E214 COMPLETE AF FORMS 9 (REQUEST FOR PURCHASE)	100
E276 MAINTAIN PROPERTY CUSTODIAN AUTHORIZATION/CUSTODY RECEIPT LISTINGS (CA/CRL)	80
E247 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	80
E186 ANNOTATE AF FORMS 126 (CUSTODIAN REQUEST LOG)	80
E298 TURN IN SURPLUS OR WONR-OUT EQUIPMENT TO BASE SUPPLY	80
E213 COMPLETE AF FORMS 601 (EQUIPMENT ACTION REQUEST)	80
E238 ESTABLISH EQUIPMENT OR TOOL REQUIREMENTS	80
E208 COMPLETE AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	80
A23 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	80

TABLE A10  
 SUPERVISORY CLUSTER  
 (STG054)

NUMBER IN CLUSTER: 99  
 PERCENTAGE OF TOTAL SAMPLE: 16%

AVERAGE TICF: 166 MONTHS

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
B44 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED MATTERS	98
C138 WRITE EPRs	95
A4 COORDINATE WORK WITH OTHER SECTIONS	92
C109 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	89
C81 CONDUCT PERFORMANCE FEEDBACK WORKSHEET (PFW) SESSIONS	87
A23 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	85
C140 WRITE RECOMMENDATIONS FOR AWARDS OR DECORATIONS	84
B76 SUPERVISE MISSILE SYSTEMS MAINTENANCE SPECIALISTS (AFSC 41150A)	82
A3 COORDINATE ACTIVITIES OF SPECIALISTS	81
B72 ORIENT NEWLY ASSIGNED PERSONNEL	80
A33 SCHEDULE LEAVES OR PASSES	78
E208 COMPLETE AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	73
B70 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	72

TABLE A11  
 MISSILE LAUNCH ANALYSIS IJT  
 (STG195)

NUMBER IN JOB: 5  
 PERCENTAGE OF TOTAL SAMPLE: 1%

AVERAGE TICF: 188 MONTHS

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
B53 DIRECT MISSILE OPERATIONAL TEST LAUNCH (OTL) ANOMALOUS PROCEDURES	100
C141 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS, OTHER THAN TRAINING REPORTS	100
B63 IMPLEMENT OTL ANOMALOUS PROCEDURES	100
A23 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	100
C90 EVALUATE INFORMATION FOR SECURITY CLASSIFICATION	100
B41 CONDUCT BRIEFINGS	100
C130 REVIEW OR COORDINATE OFFICIAL CORRESPONDENCE OR MESSAGES	100
B72 ORIENT NEWLY ASSIGNED PERSONNEL	100
A26 PLAN OR PREPARE BRIEFINGS	100
D154 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	100
A3 COORDINATE ACTIVITIES OF SPECIALISTS	100

TABLE A12

QA INSPECTION-EVALUATION IJT  
(STG151)

NUMBER IN JOB: 15  
PERCENTAGE OF TOTAL SAMPLE: 2%

AVERAGE TICF: 141 MONTHS

TASKS	PERCENT MEMBERS PERFORMING
C132 REVIEW PROPOSED TECHNICAL DATA CHANGES	100
C102 EVALUATE TECHNICAL ORDER IMPROVEMENT REPORTS	100
C86 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	100
C113 PARTICIPATE IN TECHNICAL ORDER VERIFICATION CONFERENCES	100
C136 VERIFY NEW MAINTENANCE PROCEDURES OR EQUIPMENT	93
E301 VALIDATE TO PROCEDURES	93
C87 EVALUATE DATA ON DEVELOPMENT OR MODIFICATIONS OF EQUIPMENT	93
C108 INSPECT CONDITION OR APPEARANCE OF FACILITIES OR WORK AREAS	93
C79 COMPLETE SAC FORMS 1503 (ROUTING AND REVIEW OF QUALITY CONTROL REPORTS)	93
C112 PARTICIPATE IN PRELIMINARY, SYSTEM, OR CRITICAL DESIGN REVIEWS	93
C96 EVALUATE PERSONNEL PERFORMING MAINTENANCE TASKS	86
C139 WRITE INSPECTION REPORTS	86

TABLE A13

TRAINER MAINTENANCE IJT  
(STG170)

NUMBER IN JOB: 6  
PERCENT OF TOTAL SAMPLE: 1%

AVERAGE TICF: 75 MONTHS

TASKS	PERCENT MEMBERS PERFORMING
G410 PERFORM INSPECTIONS OR LUBRICATION OF LF TRAINERS	100
E208 COMPLETE AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	100
E246 INITIATE OR COMPLETE AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	100
E209 COMPLETE AF FORMS 2005 (ISSUE/TURN-IN REQUEST)	100
G403 PERFORM INSPECTIONS OF CODE CHANGE-VERIFIER SET TRAINERS	100
G404 PERFORM INSPECTIONS OF ENVIRONMENTAL CONTROL SYSTEM/POWER PROCEDURE TRAINERS	100
G436 REMOVE OR INSTALL COMPONENTS OF LF TRAINERS	100
F368 REMOVE OR INSTALL MINOR HARDWARE, SUCH AS HINGES OR FASTENERS	100
G444 TROUBLESHOOT LF TRAINERS	100
G430 PERFORM STARTUPS, SHUTDOWNS, OR EMERGENCY SHUTDOWNS OF LF TRAINERS	100
G397 PERFORM CHECKOUTS OF LF TRAINERS	100
G395 PERFORM CHECKOUTS OF ENVIRONMENTAL CONTROL SYSTEM/POWER PROCEDURE TRAINERS	100
G396 PERFORM CHECKOUTS OF GUIDANCE AND CONTROL SECTION TRAINERS	100
G426 PERFORM STARTUPS OR SHUTDOWNS OF CONTROL MONITOR PROCEDURES TRAINERS (CMPTs)	100
E247 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	100
F360 REMOVE OR INSTALL ACCESS COVERS, PLATES, OR PANELS,	100
E281 PREPARE AF FORMS 332 (BASE CIVIL ENGINEER WORK REQUEST)	100
F322 INSPECT FOR CORROSION	100
F338 PAINT WALLS OR FLOORS	100
E215 COMPLETE AF FORMS 979 (DANGER TAG)	100
G428 PERFORM STARTUPS, SHUTDOWNS, OR EMERGENCY SHUTDOWNS OF ENVIRONMENTAL CONTROL SYSTEM/POWER PROCEDURE TRAINERS	100
G442 TROUBLESHOOT ENVIRONMENTAL CONTROL SYSTEM/POWER PROCEDURE TRAINERS	100

TABLE A14

ISD IJT  
(STG111)

NUMBER IN JOB: 6  
PERCENT OF TOTAL SAMPLE: 1%

AVERAGE TICF: 95 MONTHS

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
D160 DEVELOP PERFORMANCE TESTS	100
D184 WRITE TEST QUESTIONS	100
D157 DEVELOP LESSONS USING ALTERNATIVE INSTRUCTIONAL MEDIA, SUCH AS INTERACTIVE COURSEWARE (ICW)	83
D178 PREPARE LESSON PLANS	83
D142 ADMINISTER OR SCORE TESTS	83
D159 DEVELOP OR REVISE COURSE CURRICULA	83
D161 DEVELOP PROFICIENCY TESTS	83
D170 EVALUATE TRAINING METHODS OR TECHNIQUES	83
D166 EVALUATE INSTRUCTORS' PERFORMANCE	83
B62 IMPLEMENT NUCLEAR SURETY PROGRAMS	83
D165 EVALUATE EFFECTIVENESS OF TRAINING PROGRAMS	83
A23 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	83

TABLE A15  
 TECHNICAL COURSE INSTRUCTION IJT  
 (STG092)

NUMBER IN JOB: 6  
 PERCENT OF TOTAL SAMPLE: 1%

AVERAGE TICF: 126 MONTHS

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
G430 PERFORM STARTUPS, SHUTDOWNS, OR EMERGENCY SHUTDOWNS OF LF TRAINERS	100
G419 PERFORM OPERATION OF LF TRAINERS	100
D142 ADMINISTER OR SCORE TESTS	100
E256 LOCATE INFORMATION IN TECHNICAL, STANDARD, OR SUPPLY PUBLICATIONS	100
D178 PREPARE LESSON PLANS	100
G426 PERFORM STARTUPS OR SHUTDOWNS OF CMPTs	83
B44 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED MATTERS	83
D152 COUNSEL TRAINEES ON TRAINING PROGRESS	83
D159 DEVELOP OR REVISE COURSE CURRICULA	83
D184 WRITE TEST QUESTIONS	83
E208 COMPLETE AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	83

TABLE A16  
PROGRAM MANAGEMENT IJT  
(STG096)

NUMBER IN JOB: 5  
PERCENT OF TOTAL SAMPLE: 1%

AVERAGE TICF: 168 MONTHS

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
C87 EVALUATE DATA ON DEVELOPMENT OR MODIFICATIONS OF EQUIPMENT	100
A23 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	100
C88 EVALUATE ENGINEERING CHANGE PROPOSALS	100
A6 DETERMINE SPACE, EQUIPMENT, OR SUPPLY REQUIREMENTS	80
C112 PARTICIPATE IN PRELIMINARY, SYSTEM, OR CRITICAL DESIGN REVIEWS	60
E287 PREPARE MINUTES OF BRIEFINGS OR CONFERENCES	60
E301 VALIDATE TO PROCEDURES	60
C102 EVALUATE TECHNICAL ORDER IMPROVEMENT REPORTS	60
C130 REVIEW OR COORDIANTE OFFICIAL CORRESPONDENCE OR MESSAGES	60
A26 PLAN OR PREPARE BRIEFINGS	60
C132 REVIEW PROPOSED TECHNICAL DATA CHANGES	60

TABLE A17

E.M.D.A.S. COMPUTER OPERATION CLUSTER  
(STG141)

NUMBER IN CLUSTER: 18  
PERCENT OF TOTAL SAMPLE: 3%

AVERAGE TICF: 115 MONTHS

TASKS	PERCENT MEMBERS PERFORMING
U972 MONITOR EMDAS SYSTEMS	100
U970 COPY EXPANDED MAINTENANCE DATA ANALYSIS (EMDAS) FILES TO TAPES OR PRINTERS	100
U971 EDIT EMDAS FILES	100
U974 PERFORM HP1000 STARTUPS, SHUTDOWNS, OR EMERGENCY SHUTDOWNS	100
U975 PERFORM OPERATION OF EMDAS TAPE DRIVES OR PRINTERS	94
U976 PERFORM TERMINAL CONFIGURATION	88
U982 VERIFY EMDAS OPERATIONAL PROGRAMS	83
U973 PERFORM EMDAS NIGHTLY MAINTENANCE	83
U978 REMOVE OR REPLACE EMDAS TERMINALS	77
U981 TROUBLESHOOT EMDAS MODEM LINES	72
U979 REPAIR EMDAS MODEM FAULTS	72
U980 REPLACE EMDAS MODEMS	66