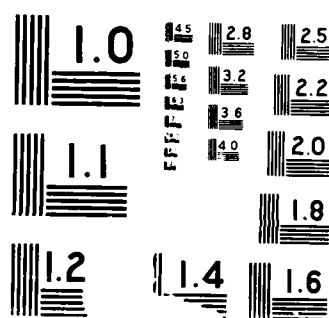
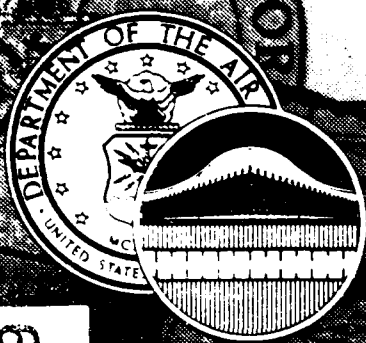


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UNITED STATES AIR FORCE

AD-A194 419

OCCUPATIONAL SURVEY REPORT

MISSILE SYSTEMS MAINTENANCE

AFSC 411X0B/C

AFPT 90-316-758

APRIL 1988

OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
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
INTRODUCTION	1
Objectives	1
Background	1
SURVEY METHODOLOGY	3
Inventory Development	3
Survey Administration	5
Survey Sample	6
Task Factor Administration	6
Data Processing and Analysis.	9
SECTION I	
SPECIALTY JOBS (Career Ladder Structure).	9
Overview	10
Summary	22
Utilization of Former 316X0T and 316X2T Personnel	22
Job Structure Comparison to Previous Survey	24
SECTION II	
ANALYSIS OF 411XOB DAFSC GROUPS	24
Skill Level Descriptions	26
Summary	32
ANALYSIS OF 411XOB AFR 39-1 SPECIALTY DESCRIPTIONS	32
AFSC 411XOB TRAINING ANALYSIS	32
AFSC 411XOB Training Emphasis and Task Difficulty	33
Analysis of AFSC 411XOB First-Enlistment Personnel.	33
AFSC 411XOB Specialty Training Standard (STS)	36
AFSC 411XOB Plans of Instruction (POIs)	40
Electronic Principles (EP)	48

TABLE OF CONTENTS (CONTINUED)

	<u>PAGE NUMBER</u>
SECTION III	
ANALYSIS OF 411XOC DAFSC GROUPS	50
Skill Level Descriptions	50
Summary	55
ANALYSIS OF 411XOC AFR 39-1 SPECIALTY DESCRIPTIONS	55
411XOC TRAINING ANALYSIS	55
AFSC 411XOC Training Emphasis	58
Analysis of 411XOC 1-48 Months TICF	58
411XOC Specialty Training Standard (STS)	61
411XOC Plan of Instruction (POI)	61
SECTION IV	
JOB SATISFACTION ANALYSIS	66
IMPLICATIONS	74
APPENDIX A	75
APPENDIX B	76

PREFACE

This report presents the results of an Air Force occupational survey of the Missile System Maintenance Specialty (AFSC 411X0B/C). The project was directed by USAF Program Technical Training, Volume Two, dated June 1985. Computer products upon which this report is based are available for use by operations and training officials.

The survey instrument was developed by Captain Keith Hopkins, Inventory Development Specialist. Mr Wayne Fruge, Computer Programmer, provided computer support for this project. Administrative support was provided by Ms Raquel A. Soliz. Second Lieutenant Michael A. Solorio analyzed the data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Thomas E. Ulrich, Chief, Airman Analysis Branch, USAF Occupational Measurement Center.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training management personnel (see distribution on page i). Additional copies are available upon request to the USAF Occupational Measurement Center, Attention: Chief, Occupational Analysis Division (OMY), Randolph AFB, Texas 78150-5000.

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Center

SUMMARY OF RESULTS

1. Survey Coverage: Survey results are based on responses from 672 Missile Systems Maintenance personnel (580 with DAFSC 411XOB and 92 with DAFSC 411XOC). This represents 62 percent of all assigned B-shred personnel and 45 percent of all C-shred personnel. Incumbents were surveyed across various Major Commands and included only 3-, 5-, and 7-skill level members.

2. Career Ladder Structure: The career ladder is composed of a variety of jobs, ranging from highly electronic-oriented jobs to analytical, GLCM-oriented, or supervisory jobs. Overall, four clusters and nine independent job types were identified. Technical jobs performed within the B-shred are extremely heterogeneous, as evident by the 12 different jobs identified, and lack of commonality in tasks performed by job incumbents in the 12 jobs. In contrast, the majority of C-shred personnel grouped into one cluster. Because of the nature of their job and their involvement with a different missile system, C-shred airmen had virtually no overlap in technical duties or functions when compared to B-shred airmen. Overall, survey data clearly support the current classification structure. An analysis of former 316XOT and 316X2T personnel (now combined into 411XOB) revealed that full integration between these AFSCs has not occurred. A substantial number of these airmen are still working in jobs specific to their previous AFSCs.

3. Career Ladder Progression: In both career ladders, 3- and 5-skill level personnel are performing jobs primarily technical in nature, with little responsibility for supervision or management. With progression to the 7-skill level, personnel across both specialties spend more time on supervisory and management functions. Besides these senior level tasks, DAFSC 41170C personnel spend 38 percent of their time performing technical functions, while 41170B airmen spend 24 percent of their time on technical functions.

4. AFR 39-1 Specialty Descriptions: Descriptions for both the 411XOB and 411XOC career ladders provide a broad overview of tasks and duties performed in each specialty. A few discrepancies were noted, however, in that functions performed by B-shred Tool Room members are not covered.

5. Training Analysis: An evaluation of the 411XOB training documents reveals many areas not supported by survey data. Specifically, multiple elements in the STS have less than 20 percent of B-shred airmen performing related tasks. Likewise, several POI objectives have less than 30 percent performance in similar areas. An alternative approach in examining these documents is suggested. This approach, using percent members performing data across job groups, lends support to many additional areas. Furthermore, several tasks with high percentages of performance were not matched to these documents. Overall, survey data suggest a thorough review is necessary for the B-shred STS and POIs.

Generally, the training documents for the 411XOC specialty are supported by survey data. Few areas in the POI, along with several unreferenced tasks in both the STS and POI, warrant review from training personnel.

6. Implications: Overall, the 411XOB Air Launch Cruise Missile and Short Range Attack Missile Maintenance specialty is a diverse career ladder. There is no doubt that within the 411XOB specialty this diversity hinders the development of both a cost-effective and comprehensive training program. Several factors in the STS and POIs, along with job satisfaction data, suggest a review of the 411XOB training program is necessary. In contrast, few discrepancies were noted in the 411XOC Ground Launch Cruise Missile Maintenance specialty.

OCCUPATIONAL SURVEY REPORT
MISSILE SYSTEMS MAINTENANCE CAREER LADDER
(AFSC 411XOB/C)

INTRODUCTION

→ This is a report of an occupational survey of two specialties (AFSC 411XOB/C) within the Missile Systems Maintenance career ladder completed by the Occupational Analysis Division, USAF Occupational Measurement Center, in February 1988. AFSC 411XOB (Air Launch Cruise Missile and Short Range Attack Missile Maintenance specialty) was created in April 1985 as part of a major realignment of missile AFSCs and functions. As part of this realignment, former Missile Systems Analyst (AFSC 316XOT) and Missile Electronic Equipment Specialist (AFSC 316X2T) career ladders were combined to form the 411XOB specialty. The last occupational survey report for the 316XOT and 316X2T career ladders was published in October 1979. AFSC 411XOC (Ground Launch Cruise Missile Maintenance specialty) was created in April 1985. This is the first occupational survey conducted for AFSC 411XOC.

Objectives *Spec. description of the job*

This survey was requested by HQ ATC/TTOA, Aircraft and Munitions Maintenance Training Division. The primary purpose for conducting the survey was to collect current data on both shreds for use in updating and validating the (STS) and POIs. A secondary reason for surveying the B-shred specialty was to gather data on the utilization of former 316XOT and 316X2T personnel in light of the merger, and to assess whether they have been fully integrated across the various B-shred jobs.

Background

411XOB Specialty

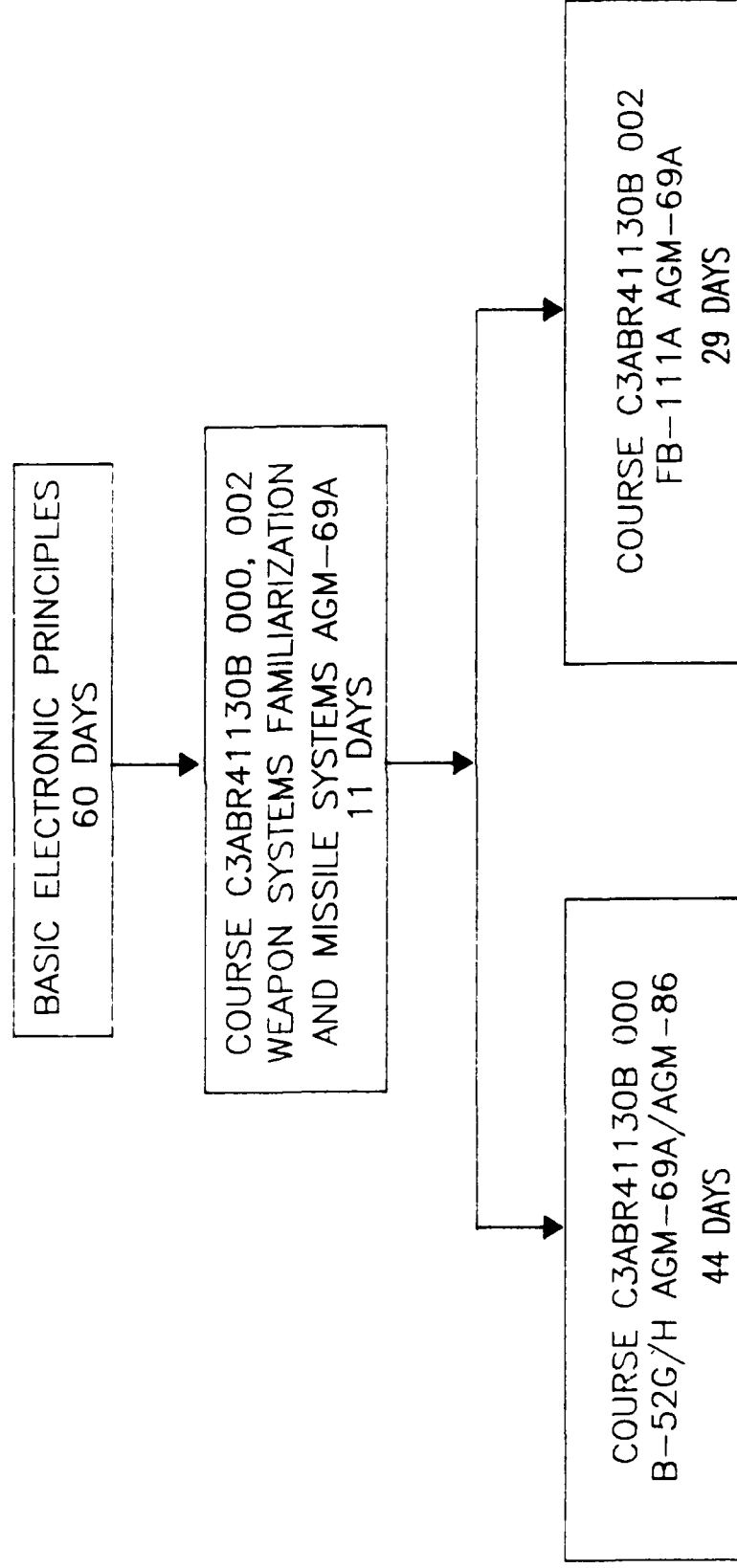
As described in AFR 39-1 Specialty Descriptions for this AFSC, 411XOB personnel are responsible for maintaining the AGM-69A Short Range Attack Missile (SRAM) and the AGM-86B Air Launch Cruise Missile (ALCM). Typical duties include performing calibration, checkout of missile systems using electronic test sets, self-verification tests of checkout equipment, and replacement to the component level on systems and equipment. Their work takes place on the flightline, in the aircraft, and in Integrated Maintenance Facilities (IMFs), which are shop or lab-type environments situated within a secure area.

Formal training for B-shred members is provided by the Technical Training Center at Chanute AFB IL. All personnel first attend a 60-day basic electronic principles course and an 11-day weapon systems familiarization course (see Figure 1). Students are then channelized into either a B-52 or FB-111A

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AFSC 411XOB TRAINING PROGRAM

CHANUTE TTC



STUDENT FLOW (FY87): 248
ATTRITION RATE (FY87): 14.9%

STUDENT FLOW (FY87): 43
ATTRITION RATE (FY87): 16.1%

FIGURE 1

Missile Systems Maintenance course. The Strategic Air Command is the single largest user of AFSC 411XOB personnel, accounting for 93 percent of all B-shred airmen.

411XOC Specialty

The primary mission of AFSC 411XOC personnel is to service and maintain the BGM-109 Ground Launch Cruise Missile (GLCM). Seventy-five percent of these airmen are stationed overseas and are assigned to USAFE. Members of this specialty calibrate and maintain related test, monitoring, and checkout equipment situated within a mobile Launch Control Center (LCC). Their work environment varies. They work in GLCM Alert and Maintenance Areas (CAMA), which are secure areas with lab and shop type sections. Other duties typical of 411XOC airmen include working in field conditions within a Main Operating Base (MOB), performing dispersal operations, and towing trailers, such as the Launch Control Center and the Teleporter Erector Launcher (TEL). Personnel are selected into this AFSC by two methods. The majority are cross-trained from AFSC 411XOA or AFSC 411XOB, while a handful are selected out of basic training (see Figure 2). Those who are chosen from basic training complete a 60-day course comprised of electronic principles and an 11-day course on GLCM systems familiarization. After completing these courses at Chanute AFB IL, they are sent to Davis-Monthan AFB AZ where they are provided with GLCM maintenance training. Airmen who cross-trained from the A or B shredouts only attend the GLCM maintenance training. Upon completion of this course, all personnel then attend a 13-week course, WCS 411XO TAC GLCM 400, also at Davis-Monthan where training is provided on dispersal field conditions and operation of the Maschinefabrick-Augsburg-Nurnberg (MAN) vehicle.

Both the 411XOB and 411XOC specialties are category "A" skills, with a minimum Armed Services Vocational Aptitude Battery (ASVAB) electronic score of 67 required for entry into the career ladder.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-316-758. A preliminary task list was prepared by the Inventory Developer after carefully reviewing the previous task list, current career ladder publications, training documents, and directives to determine the appropriateness of each task. This tentative task list was refined and validated in the field through personal interviews with subject-matter experts at Chanute Technical Training Center, the 512th Field Training Detachment at Davis-Monthan AFB, and operational bases.

To ensure full coverage of the variety of tasks performed by career ladder members, critical bases were identified according to their uniqueness or diversity based upon missiles maintained and duties performed. Operational units housed at the following bases were visited:

AFSC 411XOC TRAINING PROGRAM

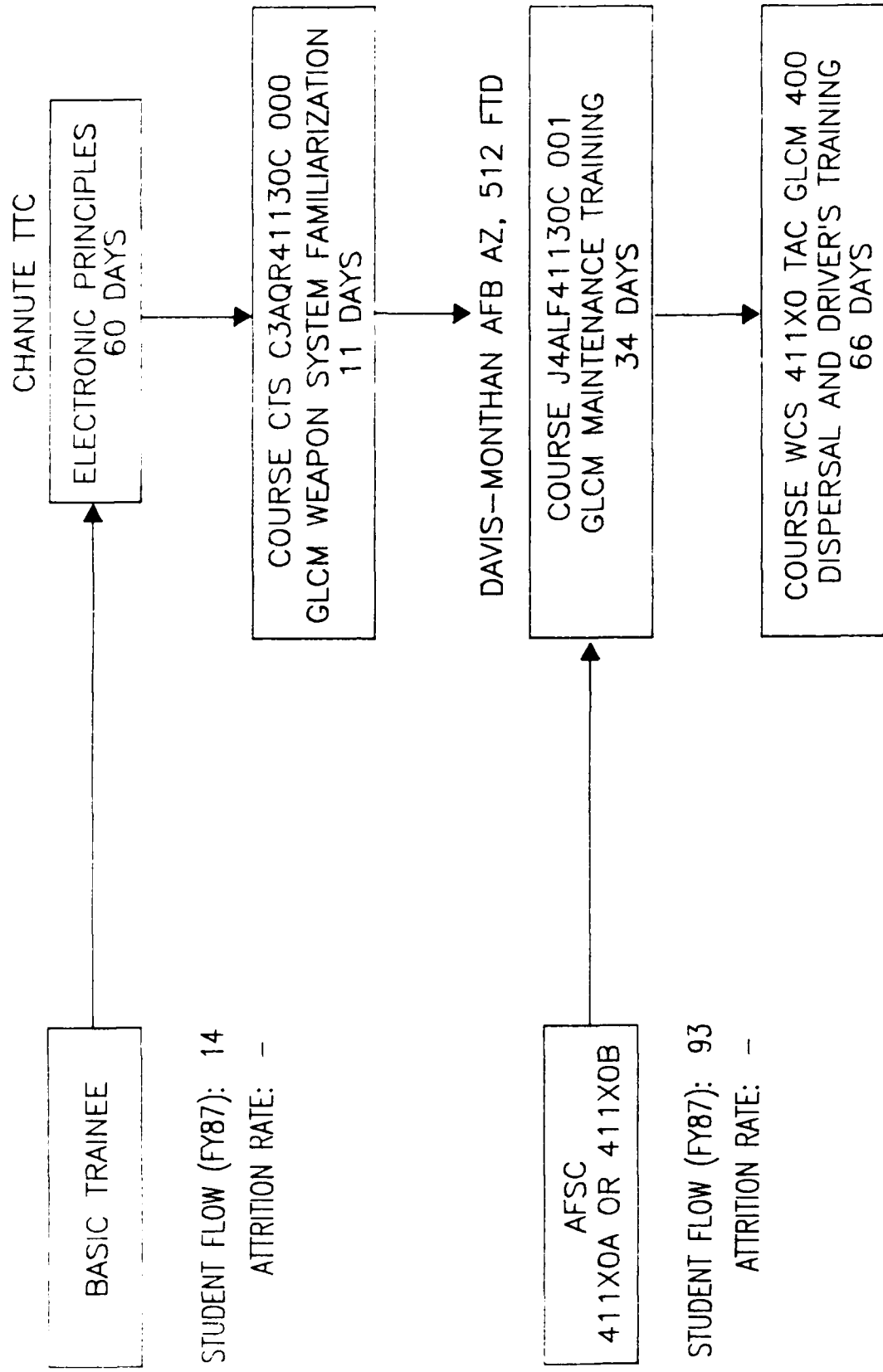


FIGURE 2

BASE	RATIONALE FOR VISIT
Chanute AFB IL	Tech School
Griffis AFB NY	B-52, ALCM and SRAM
Plattsburg AFB NY	FB-111A, SRAM
Pease AFB NH	FB-111A, SRAM
Loring AFB ME	B-52, ALCM and SRAM
Wurtsmith AFB MI	B-52, ALCM and SRAM
Davis-Monthan AFB AZ	512 FTD, 868 TMTG
RAF Greenham Common UK	GLCM
Wueschheim AS GE	GLCM
Florennes AB BE	GLCM
Comiso AS IT	GLCM

Other significant contacts with personnel having career ladder involvement included Air Force Military Personnel Center (AFMPC); classification, functional, and resource managers; Air Force functional manager; HQ ATC Training Staff Officer and the training manager.

This process resulted in a final job inventory containing 1,587 tasks grouped under 26 duty headings. Also included was a background section requesting such information as grade, time in service, job satisfaction, reenlistment intentions, weapon systems maintained, and vehicles or equipment used.

Survey Administration

From January 1987 through May 1987, Consolidated Base Personnel Offices (CBPO) at operational units worldwide administered the inventory to all eligible DAFSC 411XOB/C personnel at the 3-, 5-, and 7-skill levels. Members eligible for the survey consisted of the total assigned population, excluding the following: (1) hospitalized personnel; (2) members in transition for a permanent change of station; (3) members retiring during the time inventories were administered to the field; and (4) other members in tentative status. Participants were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL).

Each individual who filled out an inventory booklet first completed an identification and biographical information section, and then checked each task performed in their current job. Next, members rated these tasks on a 9-point scale showing relative time spent on each task as compared to all other tasks checked. Ratings ranged from 1 (very small amount of time spent) to 9 (very large amount of time 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 his or her time spent on the job. The rating for each task is then divided by the sum of all the ratings, then multiplied by 100 to provide a relative percentage of time for each task. This procedure provides the basis for

comparing tasks in terms of both percent members performing and average relative time spent.

Survey Sample

Personnel were selected to participate in this survey to ensure accurate representation across major commands (MAJCOM) and paygrade groups. Table 1 displays the MAJCOM distribution of survey respondents corresponding with the percent of assigned personnel as of November 1986. As shown in Table 1, a majority of 411XOB members are assigned to SAC, while most 411XOC airmen are assigned to USAFE. In addition, Table 2 displays survey respondents across paygrade groups. As illustrated, the survey sample for both shreds are representative and comprehensive.

Task Factor Administration

Selected senior personnel in the B- and C-shreds completed a second booklet in addition to the job inventory booklet. This second booklet is used to gather information for either training emphasis (TE) or task difficulty (TD). The TE and TD booklets are processed separately from the job inventories and provide task rating information which is used in a number of different analyses discussed in more detail in the following section of this report.

Task Difficulty (TD). TD is defined as the length of time an average airman needs to learn a task. Given this definition, 44 B-shred senior technicians rated the difficulty of all the inventory tasks on a 9-point scale (from extremely low to extremely high). To ensure the validity of the ratings, each technician's rating was compared to those of every other senior technician's rating. A statistical measurement of their agreement, known as the interrater reliability (as assessed through components of variance of standard group mean), was computed at .90, indicating good agreement among these raters. TD ratings were adjusted so tasks of average difficulty would have ratings of 5.00. The resulting data are essentially a rank ordering of tasks indicating the degree of difficulty for each task in the inventory. TD information was not gathered for the AFSC 411XOC career ladder due to the limited size of the group and small number of senior NCOs.

Training Emphasis (TE). TE is a rating of which tasks require structured training for first-term or first-job personnel. Experienced technicians (primarily 7-skill level) completing TE booklets were asked to rate tasks on a 10-point scale (from no training emphasis to extremely high training emphasis). Ratings for first-term personnel were independently collected from 38 B-shred NCOs. Ratings for first-job personnel were collected from 29 C-shred NCOs due to the lateral aspect of AFSC 411XOC specialty. To ensure validity of the ratings, each technician's ratings were compared to those of every other senior technician's ratings. A statistical measurement of their agreement, known as the interrater reliability (as assessed through components of variance of standard group means), was computed at .95 for the B-shred and .95 for the C-shred, indicating high agreement among these raters. The average TE

TABLE 1
COMMAND REPRESENTATION OF SURVEY SAMPLE

COMMAND	411X0B		411X0C	
	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
SAC	93	94	1	2
ATC	6	6	5	8
USAFE	0	**	75	61
TAC	**	**	19	29
SYS	**	0	0	0

	<u>411X0B</u>	<u>411X0C</u>
Total Assigned: *	938	206
Total Eligible: ***	708	122
Total Sample:	580	92
Percent of Assigned in Sample:	62%	45%
Percent of Eligible in Sample:	82%	75%

- * Assigned strength as of November 1986
- ** Less than 1 percent
- *** Excludes those in PCS, retirement, discharge, or hospital status; and those with less than 6 weeks on the job

TABLE 2
PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

<u>PAYGRADE</u>	<u>411X0B</u>		<u>411X0C</u>	
	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
AIRMAN	37	35	4	1
E-4	16	16	25	28
E-5	27	28	33	33
E-6	13	14	22	21
E-7	6	7	14	17

* Assigned strength as of November 1986

rating for the B-shred was .94, with a standard deviation of 1.29. The C-shred average was 1.32, with a standard deviation of 1.63. These data also provide essentially a rank ordering of tasks, whereby those with the highest ratings are perceived as most important for structured training.

TE ratings provide objective information which should be used along with TD and percent members performing data when making training decisions. Percent members performing data provide information on how many personnel perform the tasks, TE and TD ratings provide insights on which tasks need training. Using these factors, in conjunction with appropriate training documents and directives, career field managers can tailor training programs to accurately reflect the needs of the user by more effectively determining when, where, and how to train first-enlistment AFSC 411X0B and 411X0C personnel.

Data Processing and Analysis

Once job inventories are returned from the field, task responses and background information are optically scanned. Other biographical information (such as name, base, etc.) are typed onto disks and entered directly into the computer. Once both sets of data are in the computer, they are merged to form a complete case record for each respondent. Computer-generated programs, using Comprehensive Occupational Data Analysis Program (CODAP) techniques, are then applied to the data.

CODAP produces composite job descriptions for respondents based on their ratings of specific inventory tasks. These job descriptions provide information on percent members performing each task, the relative average percent time spent performing tasks, and the cumulative percent time spent by all members performing each task in the inventory. In addition to the job descriptions based upon inventory task data, the program produces summaries that show how members of each group responded to each background item. Background items aid in identifying characteristics of the group, such as DAFSCs represented, time in career field, total active federal military service, experience in various functional areas, equipment operated, and job satisfaction levels.

SECTION I

SPECIALTY JOBS (Career Ladder Structure)

A key aspect of the USAF occupational analysis program is to examine the job structure of a career ladder. Based on incumbent responses to survey questions, the tasks performed by career ladder personnel are examined and jobs are identified based on the similarity of tasks and the relative time they spent performing the tasks. The resulting job structure is then compared to official career ladder documents. This information can be used to examine

the accuracy and completeness of career ladder documents (AFR 39-1 Specialty Descriptions and Specialty Training Standards) and to gain an understanding of current utilization patterns.

For this report, the career ladder structure is described in terms of clusters and independent job types. The job type is the basic unit of job analysis. It represents a specific group of individuals performing basically the same tasks and spending similar amounts of time on those tasks. When job type members perform tasks in common with other groups, they merge to form a larger unit of related jobs termed a cluster. Specialized job types too dissimilar to fit within a cluster are labeled independent job types (IJT).

Overview

The specialty job structure of the Missile Systems Maintenance career field was determined by performing a job type analysis of the survey data provided by the 580 B-shred and the 92 C-shred survey respondents. The jobs performed by these airmen separated into four clusters and nine independent job types as shown in Figure 3. Three of the clusters and all of the independent job types were formed primarily by personnel in the 411X0B specialty, while the fourth cluster was formed exclusively with 411X0C personnel. Overall, ladder distinctions were clear, with shred-specific groupings performing separate and distinct jobs.

The four clusters and nine independent job types are listed below by title. The stage (STG) or group (GRP) number beside each title is a computer-generated reference number. The letter "N" stands for the number of personnel in each group.

- I. B-52 ALCM AND SRAM WEAPONS RELEASE TECHNICIANS IJT (STG089, N=43)
- II. MISSILE SYSTEMS CHECKOUT PERSONNEL CLUSTER (STG032, N=252)
- III. VERIFICATION AND CHECKOUT OF EQUIPMENT (VACE) PERSONNEL CLUSTER (STG055, N=70)
- IV. QUALITY ASSURANCE INSPECTORS IJT (STG079, N=13)
- V. AF/HQ MANAGERS IJT (STG090, N=13)
- VI. SECTION NCOIC PERSONNEL IJT (STG064, N=55)
- VII. B1-B WEAPONS RELEASE TEAM CHIEFS IJT (STG112, N=6)
- VIII. MUNITIONS CONTROL PERSONNEL IJT (STG202, N=33)
- IX. MISSILE MAINTENANCE ANALYSIS PERSONNEL CLUSTER (STG040, N=35)
- X. MAINTENANCE SUPPLY LIAISON TECHNICIANS IJT (STG060, N=6)

AFSC 411XOB/C CAREER LADDER STRUCTURE

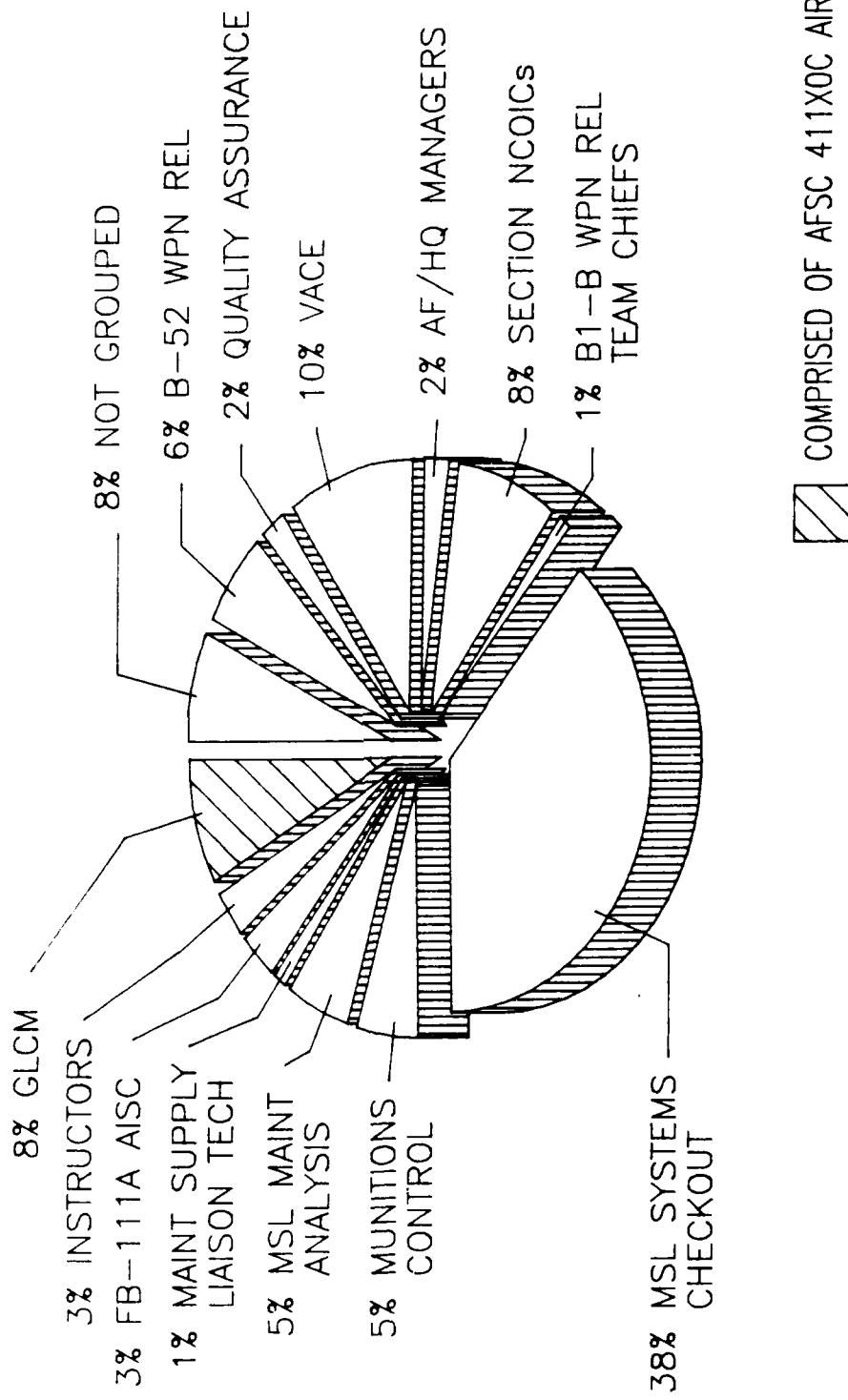


FIGURE 3

- XI. FB-111A AIRCRAFT INTEGRATED SYSTEMS CHECKOUT PERSONNEL IJT (STG205, N=22)
- XII. RESIDENT COURSE INSTRUCTORS IJT (GRP098, N=20)
- XIII. GLCM PERSONNEL CLUSTER (STG036, N=54)

Ninety-two percent of the survey respondents are represented in the above job groups. The remaining 8 percent did not group with any of the clusters or independent job types due to the uniqueness of their jobs. Brief descriptions of each cluster and independent job types are presented below. In addition, Table 3 provides selected background information across these jobs, while Appendix A lists common tasks performed by incumbents in these groups.

I. B-52 ALCM AND SRAM WEAPONS RELEASE TECHNICIANS IJT (STG089, N=43). This group of 43 airmen represents 6 percent of the total survey sample. They perform flightline maintenance on all facets of the B-52 aircraft-to-SRAM/ALCM missile interface. Comprised mostly of AFSC 411X0B personnel, 56 percent of these airmen hold a 5-skill level and 37 percent reported a 3-skill level. Specific functions include maintenance on Munitions Adapter Units (MAU) and Armament Integrated Units (AIU), as well as performing self-tests on the weapon preload testers and aircraft phase inspections. Of the average 90 tasks performed by these airmen, typical ones include:

- inspect and repair MAU-175/A
- repair and replace AGM-69A pin actuators
- perform system interface test (SIT) procedures
- replace bomb release interval controls (BRIC)
- perform critical circuit maintenance checks (CCMC)
- troubleshoot clip-in weapon (nuclear) systems
- perform physical inspection of aircraft

Members in this group work side by side with Aircraft Armament Systems Specialists (AFSC 462X0) and together they run a 24-hour shop providing maintenance to on-site alert facilities. All airmen in this group are assigned to SAC, with a majority (91 percent) in CONUS locations. They have an average of 3 1/2 years in the career field, 4 years TAFMS, and are predominantly in pay-grade E-3. It is interesting to note that 63 percent of these personnel are in their first enlistment. Overall, a high degree of similarity was noted within the group.

II. MISSILE SYSTEMS CHECKOUT PERSONNEL CLUSTER (SIG032, N=252) form the largest group representing 38 percent of the total survey sample. These AFSC 411X0B incumbents are responsible for maintaining the operational readiness of the Short Range Attack Missile and the Air Launch Cruise Missile. Typically, they perform missile checks and inspections, replacement of components, and

TABLE 3

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS

	B-52 WEAP RELEASE TECH IJT (STG089)	MISSILE SYS CHECKOUT PERSONNEL CLUSTER (STG032)	VACE PERSONNEL CLUSTER (STG055)	QUALITY ASSURANCE INSPECTORS IJT (STG079)	AF/HQ MANAGERS IJT (STG090)	SECTION NCOIC PERSONNEL IJT (STG064)
--	--	---	--	---	--------------------------------------	---

NUMBER IN GROUP
PERCENT OF SAMPLE
PERCENT IN CONUS

43
6%
91%

252
38%
95%

70
10%
93%

13
2%
92%

13
2%
77%

55
8%
89%

DAFSC DISTRIBUTION (PERCENT):

13

41130B
41150B
41170B
41130C
41150C
41170C

37%
56%
5%
0
2%
0

40%
44%
15%
0
0
*

9%
70%
21%
0
0
0

0
8%
85%
0
0
8%

0
0
62%
0
0
38%

0
7%
80%
0
2%
11%

PREDOMINATE PAYGRADES
AVERAGE TICF (MOS)
AVERAGE TAFMS (MOS)
PERCENT IN FIRST ENLISTMENT

E-3
43
47
63%

E-3/4/5
41
50
60%

E-4/5
62
74
33%

E-6/7
117
136
0%

E-7/8
120
197
0%

E-7
111
172
2%

AVERAGE NUMBER OF TASKS PERFORMED
AVERAGE NUMBER SUPERVISED
PERCENT SUPERVISING

90
3
37%

138
3
35%

215
3
47%

65
3
23%

46
2
15%

153
6
91%

* Less than 1 percent

TABLE 3 (CONTINUED)
SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS

	GLCM PERSONNEL CLUSTER (STG036)	JOBS WITHIN THE CLUSTER			
		DISPERSAL TRAINING INSTRUCTORS (STG377)	LCC/TEL/WCS MAINTENANCE TECHNICIANS STG242)	TRAINING SYSTEMS MAINTENANCE SUPPORT PERSONNEL (STG166)	
NUMBER IN GROUP	54	5	24	16	
PERCENT OF SAMPLE	8%	9%	44%	30%	
PERCENT IN CONUS	41%	100%	0%	94%	
DAFSC DISTRIBUTION (PERCENT):					
41130B	0	0	0	0	
41150B	0	0	0	0	
41170B	0	0	0	0	
41130C	2%	0	0	0	
41150C	67%	100%	79%	50%	
41170C	31%	0	21%	50%	
PREDOMINATE PAYGRADES					
	E-4/5	5	4	5	
AVERAGE T1CF (MOS)	47	77	47	44	
AVERAGE TAFMS (MOS)	105	113	81	134	
PERCENT IN FIRST ENLISTMENT	17%	0	38%	0	
AVERAGE NUMBER OF TASKS PERFORMED					
	323	210	457	201	
AVERAGE NUMBER SUPERVISED	3	3	4	3	
PERCENT SUPERVISING	39%	37%	50%	37%	

TABLE 3 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS

	B1-R WEAPONS RELEASE TEAM CHIEFS IJT (STG112)	MUNITIONS CONTROL PERSONNEL IJT (STG202)	MSL MAINT ANALY PERS CLUSTER (STG040)	MAINT SUP LIAISON TECH (STG060)	FB-111A AISC PERS IJT (STG205)	RESIDENT COURSE IJT (GRP098)
NUMBER IN GROUP	6	33	35	6	22	20
PERCENT OF SAMPLE	1%	5%	5%	1%	3%	3%
PERCENT IN CONUS	100%	82%	94%	100%	100%	100%

DAFSC DISTRIBUTION (PERCENT):

41130E	0	0	9%	0	27%	5%
41150B	83%	36%	57%	100%	64%	55%
41170B	17%	52%	34%	0	9%	40%
41130C	0	0	0	0	0	0
41150C	0	9%	0	0	0	0
41170C	0	3%	0	0	0	0

PREDOMINATE PAYGRADES

	E-5	E-5	E-5	E-4	E-3	E-4/5/6
AVERAGE T1CF (MOS)	85	90	82	67	29	96
AVERAGE TAFMS (MOS)	87	105	102	71	41	106
PERCENT IN FIRST-ENLISTMENT	0%	6%	17%	33%	77%	10%

AVERAGE NUMBER OF TASKS PERFORMED
AVERAGE NUMBER SUPERVISED
PERCENT SUPERVISING

	63	81	32	36	101	44
	3	5	2	1	3	4
	100%	39%	49%	33%	18%	15%

isolation of malfunctions within the Integrated Maintenance Facility (IMF). Performing an average of 138 tasks, they devote 50 percent of their time to 74 tasks. Typical tasks include:

- perform level 1 missile checkouts
- perform corrosion inspection
- isolate faults to missile systems
- perform roll transfers to and from missile test stands
- perform stray voltage tests
- replace control and guidance electronics (C&GE)
- fill and sand phenolic surfaces

As with the previous group, a majority of these members (96 percent) are in SAC and in CONUS locations (95 percent). Most members are in paygrade E-3, E-4, or E-5 and have an average TAFMS of over 4 years. A significant characteristic of this group is that 151 of these incumbents (60 percent of the cluster) are in their first enlistment, accounting for the largest concentration of 411XOB first-enlistment airmen.

III. VERIFICATION AND CHECKOUT OF EQUIPMENT (VACE) PERSONNEL CLUSTER (STG055, N=70). Personnel in this cluster represent 10 percent of the total survey sample and are responsible for maintaining the electronic equipment utilized by other 411XOB personnel. Seventy percent of these AFSC 411XOB incumbents hold DAFSC 41150B and spend a majority of their time performing operational checks, self-tests, repair and servicing of missile electronic equipment, and fault isolation. Compared to all other groups in the 411XOB career ladder, these technicians perform the highest average number of tasks (215 tasks) representing the more electronic oriented functions. Typical tasks unique to this cluster include:

- perform operational checks of launcher rotation tools for AGM-69A
- clean electronic test equipment
- calibrate missile radar altimeter test assemblies (MRATA)
- perform certification of safe state testers (SST)
- repair ESTS (AN/GSM-263 and AN/GSM-263A)
- repair electrical cable connectors
- perform fault isolation of OF-82 adapter groups

These incumbents are predominantly in paygrades E-4 and E-5 and average over 6 years TAFMS. Ninety-four percent of these members are assigned to SAC and 33 percent are in their first enlistment. In addition, 63 percent of these technicians are former AFSC 316X2T Missile Electronic Equipment Specialists (further discussion on the utilization of former AFSC 316X0T and 316X2T will follow later in this section of the report).

IV. QUALITY ASSURANCE INSPECTORS IJT (STG079, N=13). Personnel in this small group of 13 members are predominantly in paygrades E-6 or E-7 and hold a 7-skill level. In these senior level positions, incumbents are responsible for ensuring that operational and maintenance standards for SRAM, ALCM, or GLCM systems are being met at each of their respective bases. Ninety-two percent are B-shred. Although members of this cluster perform an average of only 65 tasks, these tasks are broad and encompass many functions. Characteristic tasks include:

- perform equipment inspections
- perform quality control inspections
- make entries on AF Forms 2419 (Routing and Review of Quality Control Reports)
- evaluate duty performance of personnel
- evaluate personnel for compliance with performance standards
- evaluate OJT trainees
- research information in technical publications

Members in this cluster have an average TAFMS of almost 12 years. B-shred personnel in this cluster are in CONUS locations and in SAC, while C-shred personnel are overseas and in USAFE.

V. AF/HQ MANAGERS IJT (STG090, N=13). Members in this small group represent the most senior level of personnel in the survey sample. The majority are assigned to SAC and USAFE, working primarily at the Air Force or Headquarters level. Predominantly, these managers hold the rank of E-7 or E-8 and are all either 41170B (62 percent) or 41170C (38 percent) personnel. Averaging over 16 years TAFMS, these incumbents devote 91 percent of their time performing supervisory, managerial, or administrative functions. Unique to this group are tasks dealing with compiling data for staff studies, determining data requirements, and planning briefings. Representative tasks of the average 46 tasks performed by this group include:

- conduct briefings
- determine equipment requirements
- determine personnel requirements
- evaluate technical data
- write recommendations for changes in procedures
- coordinate munitions maintenance functions
- evaluate equipment development data
- establish organizational policies
- draft messages

In addition, all B-shred respondents reported CONUS locations, while all C-shred members reported overseas locations.

VI. SECTION NCOIC PERSONNEL IJT (STG064, N=55). Eighty-four percent of these airmen's time is dedicated to performing supervisory, administrative, training, and quality evaluation functions. For the most part, these airmen work within the Integrated Maintenance Facility (IMF) and supervise other airmen within their functional area. Of the average 153 tasks performed by airmen in this group, typical ones include:

- determine work priorities
- evaluate duty performance of personnel
- counsel personnel on military-related matters
- perform supervisory inspections
- evaluate personnel for compliance with performance standards
- schedule maintenance

As in the previous group of AF/HQ Level Managers, the majority of these personnel are 7-skill level airmen and are mostly B-shred personnel (87 percent). This group of 55 members accounts for 8 percent of the total survey sample, and members have an average TAFMS of 14 1/2 years.

VII. B1-B WEAPONS RELEASE TEAM CHIEFS IJT (STG112, N=6). This small group of predominantly 5-skill level airmen performs similar functions as the previously described group of B-52 Weapons Release Technicians (STG089). Both groups perform flightline maintenance on the aircraft-to-missile interface. In contrast, these incumbents support the B1-B aircraft and SRAM systems while performing some supervisory functions. Personnel generally work in two-man teams performing systems interface tests, cockpit checks, and removal and replacement of components. At the same time, these members also evaluate duty performance of personnel, conduct OJT, and interpret directives for subordinates. Of the average 63 tasks performed by this group, typical ones include:

- perform physical inspection of aircraft
- install safety devices (pins, chocks, flags)
- make entries on AF Forms 623 (On-The-Job Training Record)
- inspect power units
- perform preoperational checks of missile systems
- supervise personnel other than AFSC 411X0B and 411X0C

Members in this group are also integrated with AFSC 462X0 personnel (Aircraft Armament Systems Specialists) and together they operate a 24-hour shop providing maintenance support to on-site alert facilities. These 411X0B incumbents have an average TAFMS of over 7 years and, for the most part, hold the rank of staff sergeant.

VIII. MUNITIONS CONTROL PERSONNEL IJT (STG202, N=33). Members in this group are located within munitions squadrons and are responsible for directing, scheduling, planning, and controlling maintenance for aircraft, missile, and conventional munitions. They are the focal point for all munitions-related maintenance. Typically they monitor the status of missiles and work orders, coordinate periodic inspections, and determine work priorities. Furthermore, members in this group report using equipment such as computer terminals and typewriters. Airmen in this group perform an average of 81 tasks. Characteristic tasks include:

- monitor status and location of munitions
- monitor status of missiles, work orders, boards,
and equipment
- coordinate work between duty sections
- control access to munitions
- initiate work orders
- notify agencies of weapon status changes

Representing 5 percent of the total survey sample, this group is comprised mostly of B-shred personnel (88 percent). Predominantly members hold the 5-skill level and are in paygrade E-5. Most are located in CONUS and assigned to SAC. Their average TAFMS is slightly below 9 years, with very few members (6 percent) in their first enlistment.

IX. MISSILE MAINTENANCE ANALYSIS PERSONNEL CLUSTER (STG040, N=35). This cluster of 35 4TIXOB members represents 5 percent of the total survey sample. Most of these airmen are beyond their first enlistment, being qualified to either the 5-skill level (57 percent) or the 7-skill level (34 percent). Overall, personnel in this cluster are responsible for maintaining records and historical data, analyzing maintenance trends, and compiling data for reports. Typical functions of this group include keeping track of serial numbers or batch numbers of missile and pylon components. Failures and maintenance are documented for each individual component. If problems re-occur or similar problems exist at other sites, analysis of records and historical data can be accomplished to either offer a solution or discover a "bad" batch of components. Incumbents in this cluster perform an average of 32 tasks which include:

- make entries on AFTO Forms 95 (Significant Historical
Data)
- analyze maintenance trends
- direct analysis functions
- initiate Retest OK (RTOK) reports
- compile data for reports
- maintain munitions serial number lists
- update status boards

The average TAFMS for members in this cluster is 8 1/2 years, with most holding the rank of E-5. Ninety-four percent are in CONUS locations, and 100 percent are assigned to SAC.

X. MAINTENANCE SUPPLY LIAISON TECHNICIANS IJT (STG060, N=6). This small independent job type is primarily comprised of airmen in paygrade E-4 holding a 41150B DAFSC. Over 85 percent of their job time is spent performing administrative or general shop duties. Out in the field, these personnel are better known as "tool crib" maintainers. Basic responsibilities include maintaining and issuing of equipment to repair SRAM or ALCM systems. Typical tasks consuming a relatively large percentage of their job time include:

- coordinate supply requests with base supply
- inventory bench stock items
- inventory equipment
- issue tools
- maintain technical order (TO) files
- research information in supply publications

Two of these incumbents are in their first enlistment and, as a group, these six members have an average time in service close to 5 years. All members are assigned to SAC and CONUS locations.

XI. FB-111A AIRCRAFT INTEGRATED SYSTEMS CHECKOUT PERSONNEL IJT (STG205, N=22). Working solely on the FB-111A aircraft and SRAM systems, these airmen perform similar functions to two previously described groups, the B-52 Weapons Release Technicians (STG089) and the B1-B Weapons Release Team Chiefs (STG112). Incumbents in this group typically work in a four-man crew out of a flightline shop and perform most of their duties out on the flightline. Overall, they perform weapons systems functional checks on the SRAM for the FB-111A aircraft. This includes panel checks inside the aircraft cockpit, troubleshooting and replacement of components, and rewiring of aircraft systems. Equipment typically taken out to the aircraft include missile simulators, mission data loaders, and weapons programmers. Of the average 101 tasks these specialist perform, characteristic tasks include:

- install SRAM airborne missile integrated test (SAMIT) on pylon stations
- perform nuclear weapons station intermix tests
- perform W-13 checks on aircraft weapons system
- perform pivot pylon jettison checks
- repair weapon system wiring
- replace central program units (CPU)
- perform auxiliary weapons bay door checks
- replace aircraft control panels

As with the two previously mentioned weapons release groups, these incumbents work with Aircraft Armament Systems Specialist (AFSC 462X0) and together they run a 24-hour shop providing maintenance support to on-site alert facilities. Seventy-seven percent are in their first enlistment and are predominantly in paygrade E-3. Sixty-four percent are qualified to the 5-skill level and have an average TAFMS of 3 1/2 years and slightly over 2 years TICF.

XII. RESIDENT CCOURSE INSTRUCTORS IJT (GRP098, N=20). This independent job type includes only B-shred personnel who teach resident course classes at Chanute AFB. While performing many of the technical tasks associated with their career ladder, they also perform a series of tasks unique to the classroom setting. These tasks include:

- develop tests
- counsel resident course students on training progress
- administer written tests
- secure training aids
- score written tests

These personnel average slightly below 9 years time in service and are mostly qualified at the 5- or 7-skill level.

XIII. GLCM PERSONNEL CLUSTER (STG036, N=54). This group contains the largest concentration of 4TIXOC airmen of any group in the study. Fifty-four out of 92 C-shred members in the study (59 percent) were found in this cluster. No B-shred personnel appeared in the group. Ninety-eight percent of these members are qualified at the 5- or 7-skill levels and have an average time in service of almost 9 years. Because of the newness of the specialty, the average time in this career field for incumbents is less than 4 years. Additionally, over half of these airmen are assigned to overseas locations working out of a Main Operating Base (MOB).

Overall, the largest portion of their job time is spent performing dispersal operation functions. These tasks are performed in field conditions and include such tasks as camouflage vehicles, pack individual equipment, clean M-16 rifles, construct fighting positions, and perform challenge and reply procedures. For the most part, the rest of their time is spent on maintenance and checks on the Launch Control Center (LCC), Transporter Erector Launcher (TEL), and Weapons Control Systems (WCS). The wide scope of tasks performed in the C-shred specialty is represented in the 323 average number of tasks performed by members in this group (more than any other group in the survey). Typical tasks performed by this cluster include:

- perform weapon control systems (WCS) checkouts
- connect fiber optic cables
- perform signal transfer system (STS) BIT

perform TEL premaintenance
perform operator display and entry panel (ODEP) BIT
mate MAN vehicle to trailers
perform personal hygiene under field conditions
perform convoy procedures
position vehicles by compass

Summary

Overall, four clusters and nine independent job types were identified. Technical jobs performed within the B shred are extremely heterogeneous, as evident by the 12 different jobs identified, and lack of commonality in tasks performed by job incumbents in the 12 jobs. In contrast, the majority of C-shred personnel grouped into one cluster. Because of the nature of their job and their involvement with a different missile system, C-shred airmen had virtually no overlap in technical duties or functions when compared to B-shred airmen. Overall, survey data clearly support the current classification structure.

Utilization of Former 316X0T and 316X2T Personnel

As mentioned earlier in the Objectives section of the INTRODUCTION, the utilization patterns of former Missile Systems Analysts (316X0T) and Missile Electronic Equipment Specialists (316X2T) across jobs was of interest to HQ ATC/TTOA. Therefore, an in-depth examination of current jobs held by former 316X0T and 316X2T incumbents was conducted.

Of the 580 411X0B airmen in the survey sample, 163 had formerly held either AFSC 316X0T or 316X2T before being redesignated as 411X0B airmen. Figure 4 shows the distribution of former 316X0T and 316X2T personnel across each of the current B-shred job groups. As seen in Figure 4, it is evident that both 316X0T and 316X2T personnel are found across most job groups. However, the bulk of each former AFSC are still performing jobs which correlate to their previous job. Most of the former 316X2T personnel (80 percent) are members of the Verification and Checkout of Equipment (VACE) cluster, accounting for 63 percent of that job group. Most of the former 316X0T personnel (72 percent) are members of the Missile Systems Checkout cluster, accounting for 31 percent of that group. The remaining 316X0T and 316X2T personnel are scattered across most of the other job groups; however, these jobs are small, specialized, and comprise a small percentage of the overall career ladder. More importantly, however, former 316X2T airmen are not found at all in the Missile Systems Checkout Cluster, the largest job group in the 411X0B specialty. The Missile Systems Checkout function is performed by over 40 percent of the B-shred specialty personnel and is therefore a very significant function within the specialty. The lack of former "electronic" members in this group suggests that they are not fully integrated within the 411X0B specialty. One reason for the lack of integration of electronic specialists could be the highly technical skills possessed by these former 316X2T airmen. Incumbents possessing these specialized skills may lack enthusiasm for transitioning into a less technically oriented job.

DISTRIBUTION OF FORMER AFSC 316X0T AND 316X2T AIRMAN ACROSS CURRENT CAREER LADDER JOBS

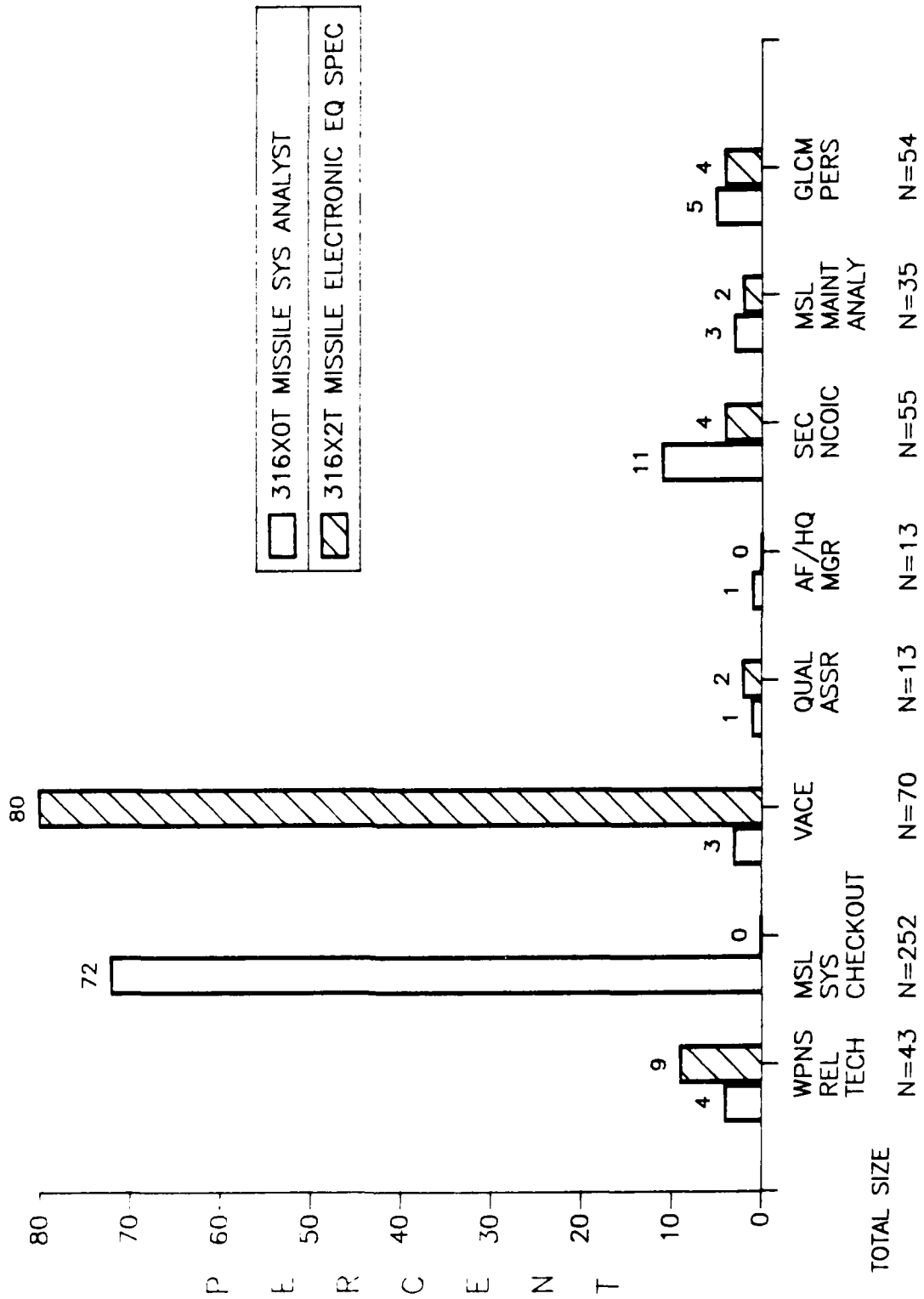


FIGURE 4

Job Structure Comparison to Previous Survey

An OSR of the Missile Systems Analyst (316X0T) and Missile Electronic Equipment Specialist (316X2T) career ladders was last completed in October 1979. As mentioned previously, these two AFSCs were merged to form the current 411X0B specialty. The current survey includes 411X0B personnel as well as 411X0C personnel.

Table 4 lists the major jobs identified in the 1979 survey and current study. A review of the 1979 jobs indicates that most of the groups could be matched to similar jobs performed by current sample groups. Overall, ten major jobs in the previous study have an equivalent counterpart in the current study. Two of the current jobs not reported in the 1979 study are jobs relating to new systems which have come on-line since 1979, the B1-B, and the Ground Launch Cruise Missile. In contrast, not identified in the current survey are the Test and Evaluation Personnel which were identified in the previous survey. These personnel are still in the career ladder and are stationed at the 31st Test Sq at Edwards AFB CA. They were not identified as a job group in the current study. With these exceptions, the basic structure has remained the same.

SECTION II

In the next sections of the report, DAFSC and training analysis will be presented for each of the two specialties. AFSC 411X0B will be presented first followed by AFSC 411X0C.

ANALYSIS OF 411X0B DAFSC GROUPS

In addition to the analysis of the career ladder structure, an examination of the jobs and tasks performed at each skill level is helpful in understanding the Missile Systems Maintenance specialty. The DAFSC analysis compares the skill levels to identify differences in task performance. This information may then be used to determine whether personnel are utilized in the manner specified by the Specialty Description (AFR 39-1) and may serve as a basis for considering changes to current utilization policies and training programs.

Comparison of the duty and task performance between DAFSCs 41130B and 41150B indicated that, even though there are some minor differences, the jobs they perform are essentially the same. Therefore, they will be discussed as a combined group in this report. Examples of tasks distinguishing between these airmen include 3-skill level personnel removing missiles from work stands and

TABLE 4

COMPARISON OF MAJOR JOBS BETWEEN SURVEYS

CURRENT SURVEY (N=672)	1979 SURVEY (N=740)
B-52 WEAPONS RELEASE TECHNICIANS IJT	FLIGHTLINE MAINTENANCE PERSONNEL
FB-111A AIRCRAFT INTEGRATED SYSTEMS CHECKOUT PERSONNEL	
MISSILE SYSTEMS CHECKOUT PERSONNEL CLUSTER	BOOSTER SECTION PERSONNEL
VERIFICATION AND CHECKOUT OF EQUIPMENT (VACE) PERSONNEL CLUSTER	VERIFICATION AND CHECKOUT OF EQUIPMENT (VACE) PERSONNEL
QUALITY ASSURANCE INSPECTORS IJT	QUALITY CONTROL PERSONNEL
AF/HQ MANAGERS IJT	MISSILE MAINTENANCE SUPERVISORS
SECTION NCOIC PERSONNEL IJT	
MUNITIONS CONTROL PERSONNEL	MUNITIONS CONTROL PERSONNEL
MISSILE MAINTENANCE ANALYSIS PERSONNEL CLUSTER	MAINTENANCE ANALYSIS PERSONNEL
MAINTENANCE SUPPLY LIAISON TECHNICIANS IJT	CONSOLIDATED TOOL ROOM MEMBERS
RESIDENT COURSE INSTRUCTORS IJT	NOT IDENTIFIED IN PREVIOUS SURVEY
B1-B WEAPONS RELEASE TEAM CHIEFS	
GLCM PERSONNEL CLUSTER	
NOT IDENTIFIED IN CURRENT SURVEY	TEST AND EVALUATION PERSONNEL

performing level 1 checkouts, while 5-skill level personnel conducted on-the-job training and counseled personnel. The distribution of skill-level groups across specialty jobs is shown in Table 5, while Table 6 lists the relative time spent on each duty. Further discussion on these data is contained below.

Skill Level Descriptions

DAFSC 41130B/50B: The 404 airmen in the 3- and 5-skill level group (representing 70 percent of the 411X0B survey sample) perform an average of 119 tasks. These airmen perform a variety of jobs in that they are dispersed across most major job groups in the specialty. The exception is that they are not represented significantly in any of the three senior level groups of Quality Assurance Inspectors, Air Force and Headquarters Level Managers, or Section NCOIC personnel. Few tasks performed by over 50 percent of 3- and 5-skill level airmen, coupled with the many different jobs they perform, suggests a great deal of diversity within this group. The largest concentration of 3- and 5-skill level personnel is contained within the Missile Systems Checkout cluster (see Table 5).

Examples of tasks likely to be performed by 3- and 5-skill level personnel include performing: roll transfer to and from missile test stands; fin locking and unlocking procedures; loaded SRAM launcher checkouts; and stray voltage tests. A more detailed job description for these journeyman-level airman is presented in Table 7.

DAFSC 41170B: Seven-skill level personnel (30 percent of the 411X0B survey sample) perform an average of 125 tasks and perform primarily as either Section NCOICs or senior level Missile Systems Checkout Specialists (see Table 5). Other 7-skill level personnel account for most of the membership in the Quality Assurance and Air Force and Headquarters level groups. Overall, these airmen supervise an average of five people and, although most of their time is spent on supervisory and management tasks, they also spend time performing technical duties (see Table 6). Examples of tasks performed by this group include determining training requirements, evaluating OJT trainees, counseling personnel on military-related manners, performing technical inspections, and evaluating damage to missile surfaces. A more complete listing of representative tasks for these incumbents can be found in Table 8.

Tasks which best distinguished the 7-skill level from their junior counterparts are presented in Table 9. Examples of tasks with the greatest difference in members performing include junior level personnel applying paints and performing stray voltage tests, while tasks performed by senior level NCOs include evaluating duty performance of personnel and evaluating compliance with performance standards. As expected, the key difference is a greater emphasis on supervisory functions for 7-skill level airmen.

TABLE 5
DISTRIBUTION OF 411X0B DAFSC GROUP MEMBERS
ACROSS CAREER LADDER JOBS
(NUMBER AND PERCENT RESPONDING)

CAREER LADDER JOBS		DAFSC 41130/50B (N=404)		DAFSC 41170B (N=176)	
		NO	PCT	NO	PC
I	R-52 WEAPONS RELEASE TECHNICIANS IJT (N=43)	40	10%	2	1
II	MISSILE SYSTEMS CHECKOUT PERSONNEL CLUSTER (N=252)	212	52%	39	22
III	VERIFICATION AND CHECKOUT OF EQUIPMENT (VACE) PERSONNEL CLUSTER (N=70)	55	14%	15	9
IV	QUALITY ASSURANCE INSPECTORS IJT (N=13)	1	*	11	6
V	AF/HQ MANAGERS IJT (N=13)	0	0%	8	5
VI	SECTION NCOIC PERSONNEL IJT (N=55)	4	*	44	25
VII	B1-B WEAPONS RELEASE TEAM CHIEFS IJT (N=6)	5	1%	1	*
VIII	MUNITIONS CONTROL PERSONNEL IJT (N=33)	12	3%	17	10
IX	MISSILE MAINTENANCE ANALYSIS PERSONNEL CLUSTER (N=35)	23	6%	12	7
X	MAINTENANCE SUPPLY LIAISON TECHNICIANS IJT (N=6)	6	1%	0	0
XI	FB-111A AIRCRAFT INTEGRATED SYSTEMS CHECKOUT PERSONNEL IJT (N=22)	20	5%	2	1
XII	RESIDENT COURSE INSTRUCTORS IJT (N=20)	12	3%	8	5
	NOT GROUPED (N=61)	<u>14</u>	<u>3%</u>	<u>17</u>	<u>9</u>
	TOTAL	404	99%	176	10

* Less than 1 percent

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

TABLE 6

AVERAGE PERCENT TIME SPENT PERFORMING DUTIES BY 411XOB DAFSC GROUPS

DUTIES	DAFSC 41130B (N=138)	DAFSC 41150B (N=266)	DAFSC 41170B (N=176)
A ORGANIZING AND PLANNING	*	3	12
B DIRECTING AND IMPLEMENTING	2	6	15
C EVALUATING	1	4	12
D TRAINING	*	5	9
E PERFORMING ADMINISTRATIVE FUNCTIONS	10	20	25
F OPERATING AND MAINTAINING MISSILE SYSTEMS	22	12	5
G OPERATING AND MAINTAINING AGM-86B	13	5	2
H OPERATING AND MAINTAINING AGM-69A	13	7	3
I PERFORMING GENERAL FLIGHTLINE MAINTENANCE	1	1	*
J PERFORMING MAINTENANCE ON B-52	7	5	2
K PERFORMING MAINTENANCE ON FB-111	3	4	*
L PERFORMING OPERATIONAL CHECKS, SELF-TESTS, AND PERIODIC INSPECTIONS OF AGM-69A/AGM-86B TEST EQUIPMENT	3	6	3
M PERFORMING FAULT ISOLATION OF AGM-69A/AGM-86B ELECTRONIC COMPONENTS AND EQUIPMENT	5	4	2
N CALIBRATING AND ADJUSTING AGM-69A/AGM-86B ELECTRONIC EQUIPMENT	*	*	*
O REPAIRING AND SERVICING MISSILE ELECTRONIC EQUIPMENT AND COMPONENTS	4	6	3
P PERFORMING GENERAL SHOP MAINTENANCE	11	9	4
Q OPERATING AND MAINTAINING MISSILE PROCEDURES TRAINER (MPT)	1	*	*
R PERFORMING LAUNCH CONTROL CENTER (LCC) RECEIPT INSPECTIONS	*	*	*
S PERFORMING TRANSPORTER ERECTOR LAUNCHER (TEL) RECEIPT INSPECTIONS	*	*	*
T PERFORMING TRANSPORTER ERECTOR LAUNCHER (TEL) MAINTENANCE	*	*	*
U PERFORMING LAUNCH CONTROL CENTER (LCC) MAINTENANCE	*	*	*
V PERFORMING LAUNCH CONTROL CENTER (LCC) CHECKS	*	*	*
W PERFORMING GROUND LAUNCHED CRUISE MISSILE (GLCM) GENERAL MAINTENANCE FUNCTIONS	*	*	*
X PERFORMING TECHNICAL ENGINEERING FUNCTIONS	*	*	*
Y OPERATING AND MAINTAINING GROUND LAUNCHED CRUISE MISSILES (GLCM) AND GENERAL PURPOSE VEHICLES	*	*	*
Z PERFORMING DISPERSAL OPERATION FUNCTIONS	*	*	*

* Less than 1 percent

TABLE 7

REPRESENTATIVE TASKS PERFORMED BY DAFSC 41130B
AND 41150B PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 41130/50B (N=404)
F308 APPLY PAINTS	69
F323 PERFORM CORROSION INSPECTIONS	66
F319 OPERATE COOLING CONTROL UNITS (CCU)	57
F326 PERFORM HAZARDOUS CURRENT TESTS	57
F327 PERFORM LEVEL 1 MISSILE CHECKOUTS	55
C111 PERFORM EQUIPMENT INSPECTIONS	54
F309 APPLY SEALERS	54
F333 PERFORM STRAY VOLTAGE TESTS	54
F311 EVALUATE DAMAGE TO MISSILE SURFACES	51
F315 MEASURE ENVIRONMENTAL CONTROL SYSTEMS (ECS) LEAKAGE RATES	51
P919 CLEAN ELECTRONIC TEST EQUIPMENT	51
F313 ISOLATE MALFUNCTIONS TO MISSILE COMPONENTS	49
F329 PERFORM LEVEL 3 CHECKOUT OF CONTROL AND GUIDANCE ELEC- TRONICS (C&GE)	49
H410 PERFORM ROLL TRANSFER TO AND FROM MISSILE TEST STANDS	49
F322 PAINT MISSILE MARKINGS	47
H407 PERFORM FIN LOCKING OR UNLOCKING PROCEDURES	46
H401 CHECK BOOSTER HYDRAULIC RESERVOIR FLUID LEVELS	44
H406 PERFORM CUTTING OPERATIONS OF SILICONE INSULATION	43
F320 PACK MISSILE COMPONENTS	42
M778 PERFORM LOADED SRAM LAUNCHER CHECKOUTS	42
E266 MONITOR STATUS OF EQUIPMENT	33

TABLE 8

REPRESENTATIVE TASKS PERFORMED BY DAFSC 41170B PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 41170B (N=176)
E226 MAKE ENTRIES ON AF FORMS 988 (LEAVE REQUEST/AUTHORIZATION)	78
B48 COUNSEL PERSONNEL ON MILITARY-RELATED MATTERS	74
B49 COUNSEL PERSONNEL ON PERSONAL PROBLEMS	73
C88 EVALUATE DUTY PERFORMANCE OF PERSONNEL	72
D156 MAKE ENTRIES ON AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	68
E236 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	65
A3 CONDUCT BRIEFINGS	64
C96 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS	63
B42 ASSIGN WORK PRIORITIES	56
C111 PERFORM EQUIPMENT INSPECTIONS	56
A26 PLAN WORK ASSIGNMENTS	54
A15 DEVELOP WORK PROCEDURES	48
E270 MONITOR STATUS OF WORK ORDERS	48
C117 PERFORM TECHNICAL INSPECTIONS	48
P43 COMPILE DATA FOR REPORTS	46
D143 DEVELOP SPECIALTY TRAINING STANDARDS (STS)	46
D149 EVALUATE OJT TRAINEES	46
E267 MONITOR STATUS OF MISSILES	44
D139 DETERMINE TRAINING REQUIREMENTS	40
C97 EVALUATE PERSONS UNDER PERSONNEL RELIABILITY PROGRAM (PRP)	39
F311 EVALUATE DAMAGE TO MISSILE SURFACES	39
C104 EVALUATE TECHNICAL DATA	36

TABLE 9
REPRESENTATIVE TASK DIFFERENCES BETWEEN DAFSC 41130B/50B
AND DAFSC 41170B PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 41130/50B (N=404)	DAFSC 41170B (N=176)	DIFFERENCE
F308 APPLY PAINTS	69	30	+39
F333 PERFORM STRAY VOLTAGE TESTS	54	23	+31
F316 MIX ADHESIVES	58	28	+30
F315 MEASURE ENVIRONMENTAL CONTROL SYSTEMS (ECS) LEAKAGE RATES	51	22	+29
F328 PERFORM LEVEL 2 MISSILE CHECKOUTS	52	25	+27
H406 PERFORM CUTTING OPERATIONS OF SILICONE INSULATION	43	19	+24
C88 EVALUATE DUTY PERFORMANCE OF PERSONNEL	22	72	-50
C96 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS	15	63	-48
A3 CONDUCT BRIEFINGS	17	64	-47
B49 COUNSEL PERSONNEL ON PERSONAL PROBLEMS	27	73	-46
A10 DETERMINE WORK PRIORITIES	24	66	-42
B59 DRAFT CORRESPONDENCE	9	50	-41
C116 PERFORM SUPERVISORY INSPECTIONS	15	55	-40
B47 COORDINATE WORK BETWEEN DUTY SECTIONS	12	49	-37
D157 MAKE ENTRIES ON AF FORMS 623A (ON-THE-JOB TRAINING RECORD- CONTINUATION SHEET)	28	65	-37
B66 INTERPRET DIRECTIVES FOR SUBORDINATES	15	51	-36
D151 EVALUATE TRAINING METHODS, TECHNIQUES, OR PROGRAMS	5	35	-30

Summary

A wide variety of jobs are performed by personnel in this career ladder. Three and 5-skill level personnel are primarily technicians, spending a majority of their time operating and maintaining the Short Range Attack Missile (AGM-69A), Air Launch Cruise Missile (AGM-86B), and associated equipment. With advancement to the 7-skill level, personnel perform primarily supervisory functions which account for 73 percent of their time. Overall, the typical pattern of increasing supervisory functions with increasing skill-level groups was noted for this specialty.

ANALYSIS OF 411XOB AFR 39-1 SPECIALTY DESCRIPTIONS

The results of the skill level and job structure analysis were compared with the AFR 39-1 Specialty Descriptions, dated 15 March 1985, for the Missile Systems Maintenance specialty. The descriptions in AFR 39-1 describe in broad terms the tasks and duties performed by members of the various skill-level groups of a career ladder.

These broad descriptions for 411XOB personnel are well supported by the findings of this survey. While depicting the technical aspect of the job, it also describes the increase in supervisory responsibilities previously described in the DAFSC analysis. All major job groups were described within AFR 39-1, with one exception. The descriptions do not comment on the unique responsibilities that are a major part of the Maintenance Supply Liaison Technician group. As described previously in the SPECIALTY JOBS section, this small group of specialists performs basic tool room functions.

AFSC 411XOB TRAINING ANALYSIS

Occupational survey data provide one of several sources of information which can be used to make training programs more relevant and meaningful to students. The three most commonly used types of occupational survey information are: (1) the percent of first-enlistment personnel performing tasks covered in the job inventory, (2) ratings of relative difficulty of tasks, and (3) the ratings of relative emphasis which should be placed on tasks for first-enlistment training. These data can be used in evaluating training documents such as the Specialty Training Standard (STS) and the Plan of Instruction (POI).

To aid in the evaluation of the 411XOB Specialty Training Standard (STS) and Plan(s) of Instruction (POIs), technical school personnel at Chanute Technical Training Center matched job inventory tasks to appropriate sections of the STS and POIs. With these matchings comparisons to the training documents were accomplished. A complete computer listing displaying percent members performing tasks, training emphasis, and task difficulty ratings for each

task, along with STS and POI matchings, has been forwarded to the technical school for its use in further detailed reviews of training documents. Summaries of these data and information are given below, preceded by an analysis of jobs performed by first-enlistment personnel.

AFSC 411XOB Training Emphasis and Task Difficulty

Training Emphasis (TE) and Task Difficulty (TD) ratings are factors that can assist tech school personnel in deciding what tasks should be emphasized in entry-level training. TE ratings provided by career ladder subject-matter experts yielded an average rating of .94, with a standard deviation of 1.29. Therefore, tasks having a rating of 2.23 (average TE + 1 standard deviation) or better are considered highly recommended for structured training. TD ratings were adjusted to an average of 5.00 and a standard deviation of 1.00. Tasks with ratings of 3.00 or better are perceived as difficult enough to warrant centralized training. For a complete discussion of TE and TD, please refer back to the Task Factor Administration section of this report.

Table 10 shows tasks upon which subject-matter experts agree require some form of structured training for first-termers. As illustrated in Table 10, the majority of tasks rated highest in training emphasis pertain to performing level 1, 2, and 3 checkouts, replacing control and guidance electronics (C & GE), and performing roll transfers to and from missile test stands. In addition, these tasks are performed by substantial percentages of first-enlistment personnel and have high TD ratings. These findings parallel the data presented previously on ANALYSIS OF DAFSC GROUPS, which revealed large percentages of 3- and 5-skill level members performing these tasks (as shown in Tables 6 and 7). While reviewing this section of the report, note that tasks receiving high ratings on both task factors accompanied by moderate to high percentages of members performing (30 percent or better) in the first-enlistment group, may justify resident training. Training decisions such as these are not only weighed against these three factors, but also take into account command concerns, safety standards, and the importance of the task.

Analysis of AFSC 411XOB First-Enlistment Personnel

In this study, there are 239 B-shred airmen in their first enlistment, representing 41 percent of all 411XOB personnel surveyed. The overwhelming majority (98 percent) are assigned to SAC and are qualified at either the 3- or 5-skill level. Figure 5 reflects the distribution of these first-enlistment airmen across career ladder jobs. As shown in Figure 5, most first-enlistment airmen are members of the Missile Systems Checkout group, accounting for 65 percent of all 1-48 months TAFMS respondents. Other job groups with moderate percentages of first-enlistment personnel include the B-52 Weapons Release IJT (12 percent), Verification and Checkout of Equipment cluster (10 percent), and the FB-111A Aircraft Integrated Systems Checkout IJT (7 percent).

TABLE 10

TASKS RATED HIGHEST IN TRAINING EMPHASIS (TE) FOR AFSC 411X0B PERSONNEL
(GREATER THAN 1 STANDARD DEVIATION ABOVE THE AVERAGE)

TASKS	TNG EMPH*	PERCENT MEMBERS PERFORMING		TASK DIFF*
		1ST JOB (N=152)	1ST ENL (N=239)	
F327 PERFORM LEVEL 1 MISSILE CHECKOUTS	6.87	70	63	6.45
F328 PERFORM LEVEL 2 MISSILE CHECKOUTS	6.68	67	60	6.57
F313 ISOLATE MALFUNCTIONS TO MISSILE COMPONENTS	6.53	61	55	6.93
F314 ISOLATE MALFUNCTIONS TO MISSILES	6.32	59	55	6.67
F332 PERFORM LEVEL 3 CHECKOUT OF RADAR SETS	6.32	48	47	7.03
F312 ISOLATE FAULTS TO MISSILE SYSTEMS	6.18	69	63	6.73
F329 PERFORM LEVEL 3 CHECKOUT OF CONTROL AND GUIDANCE ELECTRONICS (C&GE)	6.18	60	55	5.74
F325 PERFORM EMERGENCY SHUTDOWN OF TEST EQUIPMENT	6.00	50	51	3.95
F326 PERFORM HAZARDOUS CURRENT TESTS	5.92	72	64	4.80
F330 PERFORM LEVEL 3 CHECKOUT OF MISSILE INTERFACE UNIT (MIU)	5.92	53	48	6.16
E236 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	5.84	57	64	4.73
F333 PERFORM STRAY VOLTAGE TESTS	5.84	70	62	4.92
E238 MAKE ENTRIES ON AFTO FORMS 350 (REPAIR ITEM PROCESSING TAG)	5.68	64	67	4.43
F323 PERFORM CORROSION INSPECTIONS	5.61	72	70	5.29
F331 PERFORM LEVEL 3 CHECKOUT OF POWER SUPPLIES	5.58	47	47	5.22
H409 PERFORM ROLL TRANSFER TO AND FROM MISSILE HARD STANDS	5.50	61	55	4.75
H410 PERFORM ROLL TRANSFER TO AND FROM MISSILE TEST STANDS	5.50	62	56	5.08
F324 PERFORM ELECTRO-EXPLOSIVE DEVICE CHECKS	5.16	60	52	4.87
F315 MEASURE ENVIRONMENTAL CONTROL SYSTEMS (ECS) LEAKAGE RATES	4.97	68	60	4.57
H413 REPLACE CONTROL AND GUIDANCE ELECTRONICS (C&GE)	4.82	52	47	4.84

* Average Training Emphasis = .94 with SD of 1.29 (High = 2.23)

** Average Task Difficulty = 5.00 with SD of 1.00

DISTRIBUTION OF 411X0B FIRST--ENLISTMENT PERSONNEL
ACROSS SPECIALTY JOB GROUPS

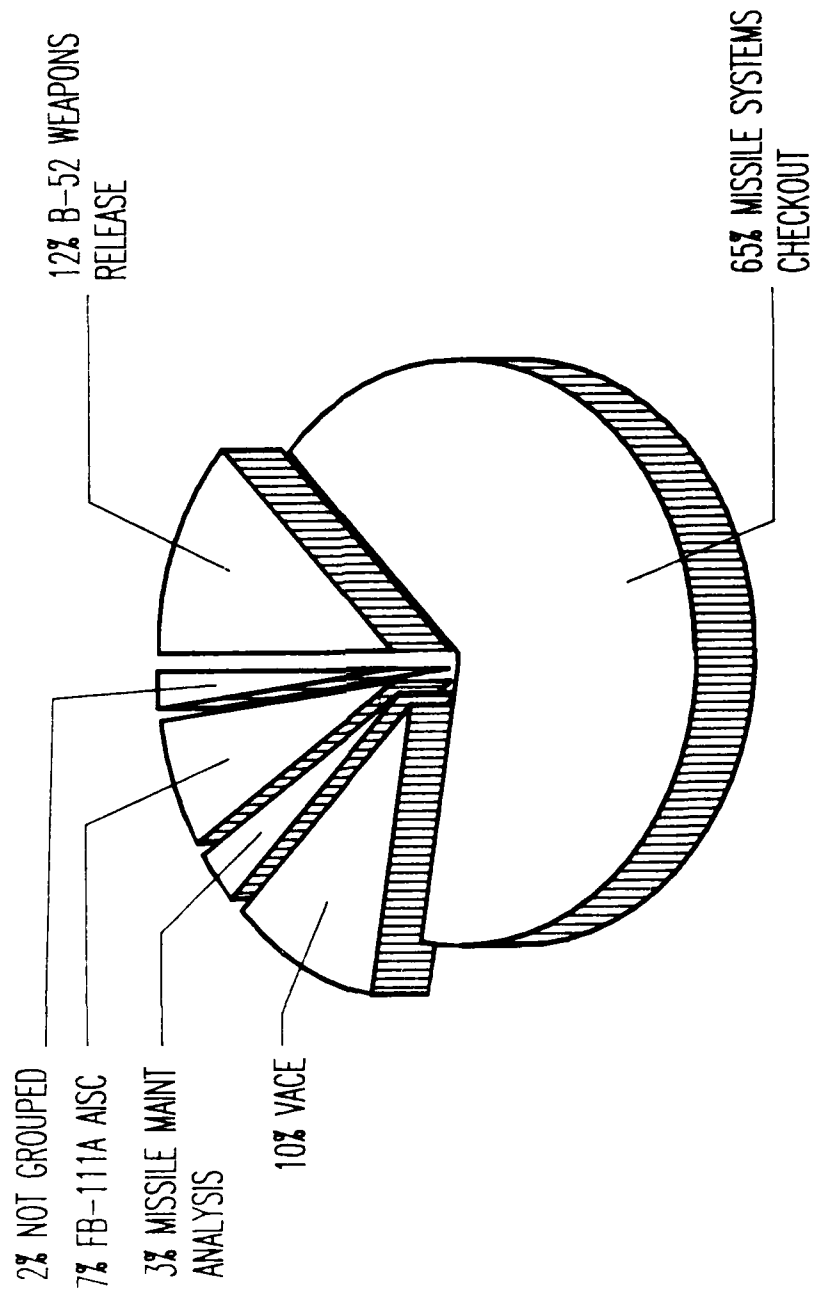


FIGURE 5

Table 11 presents a list of representative tasks performed by first-enlistment personnel. Most of the tasks pertain to Missile Systems Checkout functions. One must be cautious, however, when using these data in describing the job of first-enlistment airmen. Due to the diversity of jobs within the career ladder, it is not appropriate to derive a single job description for all first-enlistment personnel.

A closer examination of first-enlistment personnel across major career ladder jobs (previously identified in the SPECIALTY JOB section of this report) is helpful in showing the diversity among the groups. Percent time spent on duties shown in Table 12, indicates that each major B-shred job group is spending most of their time in unique areas when compared to all other groups. For example, B-52 Weapons Release personnel are spending 53 percent of their job time performing duties related to maintenance on the B-52 aircraft systems while other job groups spend less than 7 percent of their time on these duties. This suggests very little commonality among jobs held by these incumbents. A more detailed description of tasks performed by first-enlistment personnel in each major job group is contained in Appendix B. An evaluation of these tasks indicate that virtually no overlap exists between the top tasks performed by members in each group.

In summary, these findings indicate that entry-level training should receive a substantial degree of emphasis on tasks characteristic of the Missile Systems Checkout group due to their large representation of the specialty. However, tasks descriptive of the smaller job groups (presented in Appendix B) should also be considered during basic course instruction.

AFSC 411X0B Specialty Training Standard (STS)

A comprehensive review of STS 411X0B, Missile Systems Maintenance specialty, dated May 1985 with changes dated January 1986, was made by comparing STS elements to survey data. STS elements with performance objectives were reviewed in terms of training emphasis, task difficulty, and percent members performing information as stipulated in ATCR 52-22, dated 8 December 1986. STS elements containing general career ladder knowledge and information were not reviewed. Typically, tasks performed by 20 percent or more of personnel in appropriate experience or skill level groups, such as first-enlistment (1-48 months TAFMS), and 5- and 7-skill level groups, should be considered for inclusion in the STS.

Overall, 83 elements of the STS (out of 222 matched elements) were not supported, in that they had matched tasks performed by less than 20 percent of any of the above career ladder groups. This lack of support across so many elements no doubt is due to the diversity of jobs performed by 411X0B personnel. Generally, the majority of unsupported STS elements were found in the paragraphs listed below:

TABLE 11
 REPRESENTATIVE TASKS PERFORMED BY AFSC 411X0B
 FIRST-ENLISTMENT PERSONNEL
 (1-48 MONTHS TAFMS)

TASKS	PERCENT MEMBERS PERFORMING (N=239)
F308 APPLY PAINTS	78
E238 MAKE ENTRIES ON AFTO FORMS 350 (REPAIR ITEM PROCESSING TAG	67
F310 CLEAN MISSILE SURFACES	64
F319 OPERATE COOLING CONTROL UNITS (CCU)	64
F312 ISOLATE FAULTS TO MISSILE SYSTEMS	63
F327 PERFORM LEVEL 1 MISSILE CHECKOUTS	63
F318 MIX SEALANTS	60
F322 PAINT MISSILE MARKINGS	55
P919 CLEAN ELECTRONIC TEST EQUIPMENT	54
H411 PERFORM ROLL TRANSFER TO AND FROM MISSILE TRAILERS	52
H406 PERFORM CUTTING OPERATIONS OF SILICONE INSULATION	50
H401 CHECK BOOSTER HYDRAULIC RESERVOIR FLUID LEVELS	49
F332 PERFORM LEVEL 3 CHECKOUT OF RADAR SETS	48
F317 MIX AERODYNAMIC FILLERS	47
H402 FILL AND SAND PHENOLIC SURFACES	46
F342 REPLACE UMBILICAL RECEPTACLE SEALS	42
H417 REPLACE ELECTRONIC SECTION SHELLS	41
G350 INSTALL MISSILES ON MISSILE WORK STANDS	40
H425 REPLACE POWER SUPPLIES	39
Q957 APPLY FACILITY POWER	35
M777 PERFORM LOADED ALCM PYLON CHECKOUTS	32
L660 PERFORM LOADING OF ESTS OPERATING SYSTEM SOFTWARE	31
E269 MONITOR STATUS OF VEHICLES	26
H404 OPERATE ENVIRONMENTAL CONTROL UNITS (ECU)	26

TABLE 12

PERCENT TIME SPENT ON DUTIES BY AFSC 411XOB FIRST-ENLISTMENT PERSONNEL ACROSS MAJOR JOB GROUPS

DUTIES	1-48 MONTHS TAFMS				
	ALL 411XOB PERSONNEL (N=239)	R-52 WEAP RELEASE PERSONNEL (N=27)	MSL SYS CHECKOUT PERSONNEL (N=151)	VACE PERSONNEL (N=23)	FB-111A AISC CHECKOUT PERSONNEL (N=17)
A ORGANIZING AND PLANNING	*	*	*	*	*
B DIRECTING AND IMPLEMENTING	2	*	*	*	*
C EVALUATING	2	2	1	1	*
D TRAINING	1	2	*	*	*
E PERFORMING ADMINISTRATIVE FUNCTIONS	12	12	9	9	9
F OPERATING AND MAINTAINING MISSILE SYSTEMS	19	5	29	4	1
G OPERATING AND MAINTAINING AGM-86B	10	*	15	2	*
H OPERATING AND MAINTAINING AGM-69A	11	*	17	*	*
I PERFORMING GENERAL FLIGHTLINE MAINTENANCE	2	7	*	*	8
J PERFORMING MAINTENANCE ON B-52	7	53	*	*	1
K PERFORMING MAINTENANCE ON FB-111	5	*	*	*	65
L PERFORMING OPERATIONAL CHECKS, SELF-TESTS, AND PERIODIC INSPECTIONS OF AGM-69A/AGM-86B TEST EQUIPMENT TEST EQUIPMENT	4	*	3	24	2
M PERFORMING FAULT ISOLATION OF AGM-69A/AGM-86B ELECTRONIC COMPONENTS AND EQUIPMENT	4	*	5	11	*
N CALIBRATING AND ADJUSTING AGM-69A/AGM-86B ELECTRONIC EQUIPMENT	*	*	*	6	*
O REPAIRING AND SERVICING MISSILE ELECTRONIC EQUIPMENT AND COMPONENTS	5	2	4	25	*
P PERFORMING GENERAL SHOP MAINTENANCE	11	15	11	13	8

* Less than 1 percent

NOTE: Column may not add to 100 percent due to rounding

TABLE 12 (CONTINUED)

PERCENT TIME SPENT ON DUTIES BY AFSC 411XOB FIRST-ENLISTMENT PERSONNEL ACROSS MAJOR JOB GROUPS

DUTIES	ALL 411XOB PERSONNEL (N=239)	1-48 MONTHS TAFMS				VACE PERSONNEL (N=23)	FB-111A AISC CHECKOUT PERSONNEL (N=17)
		B-52 WEAP RELEASE PERSONNEL (N=27)	MSL SYS CHECKOUT PERSONNEL (N=151)				
Q OPERATING AND MAINTAINING MISSILE PROCEDURES TRAINER (MPT)	1	*	2		1	*	*
R PERFORMING LAUNCH CONTROL CENTER (LCC) RECEIPT INSPECTIONS	*	*	*		*	*	*
S PERFORMING TRANSPORTER ERECTOR LAUNCHER (TEL) RECEIPT INSPECTIONS	*	*	*		*	*	*
T PERFORMING TRANSPORTER ERECTOR LAUNCHER (TEL) MAINTENANCE	*	*	*		*	*	*
U PERFORMING LAUNCH CONTROL CENTER (LCC) MAINTENANCE	*	*	*		*	*	*
V PERFORMING LAUNCH CONTROL CENTER (LCC) CHECKS	*	*	*		*	*	*
W PERFORMING GROUND LAUNCHED CRUISE MISSILE (GLCM) GENERAL MAINTENANCE FUNCTIONS	*	*	*		*	*	*
X PERFORMING TECHNICAL ENGINEERING FUNCTIONS	*	*	*		*	*	*
Y OPERATING AND MAINTAINING GROUND LAUNCHED CRUISE MISSILES (GLCM) AND GENERAL PURPOSE VEHICLES	*	*	*		*	*	*
Z PERFORMING DISPERSAL OPERATION FUNCTIONS	*	*	*		*	*	1

* Less than 1 percent

NOTE: Column may not add to 100 percent due to rounding

20. Electronic Test/Calibration/Certification Equipment
21. AGM69A Support Equipment, Non-OAS
22. Support Equipment, Common OAS/Non-OAS
23. Support Equipment, AGM69A/AGM86B/OAS
27. Intermediate Level Maintenance, AGM69A/GSM-133
29. Flightline Organizational Maintenance, FB-111A/AGM69A
30. Organizational Level Maintenance, AGM86B
33. Flightline Organizational Maintenance, B-52G/H OAS

Examples of elements within these paragraphs, with percent performing and TE and TD data, are displayed in Table 13.

Due to the variety of jobs within this specialty, a different perspective may prove helpful in examining the STS. Another product was created showing percent members performing data across the four major jobs. Using these data, only 13 elements were not supported as opposed to 83 when using total sample data. In most cases, at least 20 percent of at least one job were found performing matched tasks. For example, STS element 21(d)3, listed in Table 14, has 100 percent of FB-111A Aircraft Integrated Systems Checkout personnel (STG205) performing related tasks. In contrast, the three other major jobs do not perform tasks related to this element. Further examples of STS elements supported using this approach are also listed in Table 14.

Additionally, this method clearly points out STS elements which are not supported by any major jobs. These elements with less than 20 percent performance across the major jobs are listed in Table 15. Training personnel should seriously consider deletion of these elements from the STS.

Several tasks from the job inventory pertaining to GLCM equipment were not matched to the STS. A few tasks referring to operating and maintaining missile systems, training, and administrative functions were also unmatched. Examples of technically oriented tasks performed by greater than 20 percent of B-shred airmen and not referenced to the STS are listed in Table 16. It is interesting to note that some of the more common functions relate to packing and unpacking missiles. Generally, such tasks not referenced should be covered by some existing element, or a new item could be added to the STS.

411X0B Plans of Instruction (POIs)

The Plans of Instruction (POIs) for this AFSC are contained in three volumes, dated 21 January 1986. The first two blocks of instruction for both B-shred courses are identical and are maintained in POI 3ABR41130B-000, 002. POI 3ABR41130B-000 contains instruction for personnel tracked into the B-52G/H, AGM-69A/AGM-86 systems, while POI 3ABR41130B-002 contains instruction for the FB-111A/AGM-69A systems (see Figure 1 in the INTRODUCTION).

Based on assistance from technical school subject-matter experts in matching job inventory tasks to the POIs, occupational survey data were matched to related training objectives. A similar method to that of the STS analysis was used to review each POI. Specific data examined included percent members performing data for first-enlistment personnel.

TABLE 13

EXAMPLES OF LOW PERFORMANCE AFSC 411X0B STS ELEMENTS

STS ELEMENT (WITH SELECTED SAMPLE TASKS)	PERCENT MEMBERS PERFORMING				TRNG EMPH*	TASK DIFF**
	1ST ENL (N=239)	DAFSC 41150B (N=266)	DAFSC 41170B (N=176)			
20b(1) USE PRECISION POWER SUPPLIES TO MAINTAIN AGM69A/AGM86B AGE (2b) N800 CALIBRATE ESTS (AN/GSM-263 AND AN/GSM-263A)	9	17	11		2.05	7.10
20b(2) USE VOLTAGE/CURRENT MEASURING EQUIPMENT TO MAINTAIN AGM69A/AGM86B AGE (2b) N803 CALIBRATE MISSILE RADAR ALTIMETER TEST ASSEMBLIES N800 CALIBRATE ESTS (AN/GSM-263 AND AN/GSM-263A)	9 9	17 17	11 11		2.66 2.05	8.33 7.10
21a(4) PERFORM SELF-TEST ON CHECKOUT SEQUENCE PROGRAMMING SET, AN/GSM-133 (2b) L710 PERFORM SELF-TESTS OF AN AN/GSM-133 AND AN/GSM-211(V) CHECKOUT SEQUENCING PROGRAMMING SETS	3	6	1		2.05	5.65
22b(3) OPERATE AGM-69A MISSILE TEST STAND(2b) L666 PERFORM OPERATIONAL CHECKS OF SRAM MISSILE TEST STANDS	7	14	10		2.29	5.67
22d(2) PERFORM MAINTENANCE PROCEDURES ON LAUNCHER ROTATION TOOL (2b) M730 PERFORM ELECTRICAL CHECK OF LAUNCHER ROTATION TOOL	7	14	9		2.08	5.87
23a(2) OPERATIONAL USE OF ENGINE LEAK DETECTOR (2b) L654 PERFORM LEAK TESTS ON ALCM ENGINE LEAK DETECTORS	4	4	1		1.37	4.75
27F(2) PERFORM CHECKOUT OF THE FB-111A CARRIER AIRCRAFT CONTROL AND DISPLAY PANEL L663 PERFORM OPERATIONAL CHECKOUTS OF CONTROL AND DISPLAY PANELS	6	9	5		1.74	4.58
33a(4) PERFORM LAUNCHER/PYLON SIMULATOR (WPT) CHECKOUT J487 PERFORM LAUNCHER PYLON SIMULATOR CHECKS	7	9	4		1.89	5.38

* Average Training Emphasis = .94 with SD of 1.29 (High = 2.23)

** Average Task Difficulty = 5.00 with SD of 1.00

TABLE 14

ALTERNATIVE APPROACH TO SUBSTANTIATE AFSC 411X0B STS ELEMENTS

STS ELEMENTS AND MATCHED TASK	PERCENT MEMBERS PERFORMING			
	B-52 WEAPONS RELEASE PERSONNEL (N=43)	MSL SYS CHECKOUT PERSONNEL (N=252)	VACE PERSONNEL (N=70)	FB-111A AISC PERSONNEL (N=22)
21(d)3 Perform self test on missile simulator, AN/AWM-39A, and Launcher Missile Simulator, AN/AWM-40A				
K585 Perform nuclear weapons station intermix tests	0	0	0	100
K567 Install SRAM airborne missile integrated test (SAMIT) on pylon stations	0	0	0	100
22(b)3 Operate missile AGM-69A test stand, AF32AT-1A				
L666 Perform operational checks of SRAM A/E32T missile test stands	0	2	70	0
23(b)3C Perform Auto calibration test				
L724 Perform the ESTS auto-cal portion of the calibration- certification tests	0	3	83	0
29(a)6 Perform Carrier Aircraft Equipment (CAE) checkout				
K572 Perform CAE checkout test procedures	0	0	0	100
K571 Perform auxiliary weapons bay door checks	0	0	0	100
K576 Perform control and display panel checkouts	0	1	0	100
33(a)4 Perform the launcher/pylon simulator (WPT) checkout				
J498 Perform self-test on weapon preload testers (WPT)	98	3	10	0
J487 Perform launcher pylon simulator checks	58	2	0	0

TABLE 15

STS AREAS WITH LESS THAN 20 PERCENT MEMBERS PERFORMING IN ANY JOB GROUP

STS AREA

- | | |
|---------|---|
| 21(a)6 | Perform calibration on AGM69A support equipment (non OAS) |
| 21(c)3 | Perform self-test on digital data inserter set AN/AJQ-22A |
| 21(c)4 | Perform maintenance procedures on digital data inserter set AN/AJQ-22A |
| 23(a)2 | Support equipment (AGM69A/AGM86B/OAS)- operational usage of engine leak detector (MXU-720/E) |
| 27(d) | Isolate B-52 carrier aircraft equipment malfunctions |
| 27(f)6 | Perform checkout of the SRAM airborne mission trainer (SAMIT) on the FB-111A carrier aircraft |
| 27(g) | Isolate FB-111A carrier aircraft equipment malfunctions |
| 27(h)1 | Repair the master digital computer on FB-111A carrier aircraft equipment |
| 27(h)3 | Repair the signal data distributor processor on FB-111A carrier aircraft equipment |
| 30(h)14 | Replace heat exchanger missile component |
| 30(h)20 | Replace engine air inlet missile component |
| 30(h)21 | Replace fuel pump electronic unit missile component |

TABLE 16

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

TASKS	PERCENT MEMBERS PERFORMING			TNG EMP*	TASK DIFF
	1ST ENL (N=239)	DAFSC 41150B (N=266)	DAFSC 41170B (N=176)		
F335 REPLACE ECS AIR DUCTS	27	30	16	4.11	5.1
H428 REPLACE RACEWAY WIRE HARNESSSES	23	24	11	3.87	6.6
F344 UNPACK MISSILES	26	23	18	3.50	4.2
B65 INITIATE WORK ORDERS	17	36	52	3.37	4.2
O833 PERFORM ROUTINE SOLDERING OPERATIONS	20	29	16	3.34	5.1
F321 PACK MISSILES	34	31	16	3.08	4.7
F320 PACK MISSILE COMPONENTS	48	39	21	3.29	3.7
P927 INSPECT MAINTENANCE VEHICLES	41	42	26	2.16	4.2
P933 PACK SUPPLY TURN-INS	29	33	27	1.47	3.2
P934 PACK TEST EQUIPMENT	13	23	16	1.16	3.5

* Average Training Emphasis = .94 with SD of 1.29 (High = 2.23)

** Average Task Difficulty = 5.00 with SD of 1.00

POI 3ABR41130B-000, 002 (common blocks of instructions). Because common blocks of instruction are very general, tasks from the inventory were matched to only 17 POI objectives (out of 35 POI objectives in the common blocks). Blocks pertaining to theory and weapons systems familiarization were examined. Of the 17 POI objectives matched with survey data, 11 were not supported, as fewer than 30 percent of first-enlistment personnel indicating performing the matched tasks. This equates to only 7 out of 88 total course hours in the common blocks. Overall, areas not supported due to low percentages of personnel performing pertained to Weapon Systems Familiarization. These objectives, not supported by survey data, cover basic knowledge and, therefore may be deemed important enough by training personnel that they be kept in the training document.

POI 3ABR41130B-000 (B-52 AGM-69A/AGM-86). In this POI, 66 objectives were matched with survey data. Of these objectives, 26 were not supported, having less than 30 percent of first-enlistment personnel indicating performing the matched tasks. This equates to 50 out of 351 total B-52 AGM-69A/AGM-86 course hours. Generally, areas not supported relate to the A/E32T missile test stand, missile destination preset computer, missile radar set, and the Offensive Avionic System (OAS) to include preoperational checks, ground simulated launch test, power application, and launcher pylon simulator checks. Listed in Table 17 are examples of these objectives with performance data.

POI 3ABR41130B-002 (FB-111A AGM-69A). Of the 53 objectives from this POI matched with survey data, 26 were not supported using the same criteria discussed above. This equates to 23.5 out of 230 total FB-111A AGM-69A course hours. Generally, areas not supported relate to Electronic Systems Test Set (ESTS) operation, and FB-111A/AGM-69A flightline organizational maintenance to include performing aircraft preparation for checkouts, and flightline checkouts. Examples of these objectives along with performance data are listed in Table 17.

In accordance with ATCR 52-22, and in the interest of cost-effectiveness, objectives where the probability of first-enlistment performance is less than 30 percent should not be taught in a resident training course without further justification. Although it appears that, due to the diversity of the career ladder, a completely cost-effective training course may not be possible, it is obvious that some form of technical training is necessary. Therefore, it is suggested that training management personnel consider another set of performance data in evaluating the POIs, as was mentioned previously in the analysis of the STS section. Specifically, examining the performance data for first-enlistment personnel across the four major B-shred jobs may provide some insight. Not only will this approach be more helpful, but it will better represent support or nonsupport of POI objectives across jobs. This presentation of data is essential because of the channelization of training. Jobs related to each course may lend support for retaining otherwise unsubstantiated objectives in the POI. A glance at Table 18 indicates that some unsupported POI objectives are performed by greater than 30 percent of personnel across major jobs. For example, 57 percent of VACE personnel perform operational checks of the SRAM A/E32T missile test stand, which supports POI objective VI 7(a)1. However, less than 2 percent of other jobs perform these tasks.

TABLE 17

EXAMPLES OF LOW PERFORMANCE AFSC 411X0B POI OBJECTIVES

		1-48 MOS TAFMS
		PERCENT PERFORMING*
<u>POI 3ABR41130B-0001</u>		
IV 3(b)	Using crimpers, handtools and consumable materials, repair two broken wires by splicing	14
V 2(a)2	Replace the guided missile controller	24
VI 8(e)4	Repair missile power supply	18
VII 7(a)	Given T0 1B-52G-2-38Jg-1, determine procedures for performing a pre-operational check	15
VII 7(b)	Given a technical order, determine the procedures for performing a ground simulated launch test	13
VII 8(a)	Given a technical order, determine procedures for performing weapon system power application	10
VII 9(a)	Given a T0, a t-56 aircraft trainer, and working as a team member, perform a ground maintenance computer program (GMCP) checkout	10
<u>POI 3ABR41130B-0002</u>		
IV 8(b)	Using technical data, state general principles concerning the procedures for checkout of the missile power supply	23
IV 9(b)	Given technical data, determine the procedures for repair of the control and display panel	8
VI 2(a)	Given T0, FB-111A Launch Control Trainer (T-36) and working as a team member, perform preparation for operational checkout	15
VI 3(b)	Given T0, printer set A/E37A-5 and working as a team member, perform printer set self-test	8
VI 3(c)	Given T0, FB-111A Launch Control Trainer (T-36) and working as a team member, perform scoring data retrieval	7
VI 3(g)	Given T0, FB-111A Launch Control Trainer (T-36) and working as a team member, perform Carrier Aircraft Equipment checkout	8

NOTE: Percent shown is the highest percent reported for a task matched to the POI objective

TABLE 18

EXAMPLE OF AN ALTERNATIVE APPROACH TO SUBSTANTIATE AFSC 411X0B POI OBJECTIVES

		1-48 MONTHS TAFMS PERCENT MEMBERS PERFORMING							
		B-52 WEAP RELEASE PERSONNEL	MSL SYS CHECKOUT PERSONNEL	VACE PERSONNEL	FB-111A AISC PERSONNEL				
POI 000,002 OBJECTIVE	MATCHED TASK								
I 3(b)	P946 PERFORM WEAPONS AREA STORAGE SECURITY CHECKS	0	15	43	0				
POI 000 OBJECTIVE	MATCHED TASK								
IV 3(b)	0836 REPAIR ELECTRICAL CABLES	4	7	96	0				
V 2(a)1	G390 REPLACE MISSILE RADAR ALTIMETERS (MRA)	0	38	9	0				
	G391 REPLACE NOSE CAPS	0	32	9	0				
VI 7(a)1	L666 PERFORM OPERATIONAL CHECKS OF SRAM A/E32T MISSILE TEST STANDS	0	2	57	0				
VII 7(a)	1452 PERFORM PREOPERATIONAL CHECKS OF MISSILE SYS	30	8	0	88				
POI 002 OBJECTIVE	MATCHED TASK								
IV 8(e)1	0904 REPLACE PRINTED CIRCUIT CARD ASSEMBLIES	0	28	83	0				
	0906 REPLACE RADAR SET COMPONENTS	0	38	4	0				
IV 9(b)	0864 REPLACE CONTROL AND DISPLAY PANEL COMPONENTS	4	6	35	0				
VI 2(f)	K587 PERFORM OPERATIONAL DATA INSERTION PROCEDURES	0	0	0	88				
VI 2(q)	1450 PERFORM POSTOPERATIONAL CHECKS OF MISSILE SYS	7	7	0	76				

With this approach, many additional sections of the POI were identified with greater than 30 percent members performing matched tasks. Applying ATCR 52-22 criteria across these jobs indicates POI 3ABR41130B-000, 002 having 8 nonsupported objectives (versus 11), POI 3ABR41130B-000 having 7 nonsupported objectives (versus 26), and POI 3ABR41130B-002 having 4 nonsupported objectives (versus 26). Overall, 19 POI objectives accounting for 15 out of 669 total course hours were clearly not supported by any major job. These objectives are listed below and range from security training to repairing the signal data distributor processor. Training management personnel should review these objectives to determine retention or deletion of these areas:

POI Objectives Not Supported Across Any Major Job Group

POI 3ABR41130B-000, 002

I. 3(a), 5(a), 6(a),(b),(d),(e), 7(b)(c)

POI 3ABR41130B-000

IV. 2(a),(b), 5(h) V. 2(b)2,3,4,5

POI 3ABR41130B-002

III. 3(a),(c) IV. 9(a)1,2

Many technical tasks performed by over 30 percent of first-enlistment personnel were not matched to the POIs. Examples of these tasks with survey data across major jobs are listed in Table 19. Some of these tasks deal with the installation of missiles on fuel stands, performing rocket motor nitrogen maintenance, and repairs to radar antenna surfaces. In addition to many members performing these functions, several of these tasks were rated high in terms of TE and TD. Training personnel should carefully review these unreferenced tasks to determine the necessity for training and the most effective method of accomplishing it.

Electronic Principles (EP)

The Electronic Fundamentals paragraph of the STS (paragraph 12) and the electronic principles taught in the basic course can be evaluated using data from the Electronics Principles Inventory (EPI). The EPI is a knowledge-based inventory containing 1,366 questions in 63 electronic-related subject areas. It identifies the range of electronic principles personnel must understand to perform any electronics-related job.

The last EPI for this career ladder was administered between December 1982 and July 1983. At that time, airmen in AFSCs 316X0T and 316X2T performed the functions of the current 411X0B specialty. Ninety AFSC 316X0T and 316X2T 5-skill level airmen completed the EPI. A comprehensive EPI Report for those AFSCs taught at Charute Air Force Base was published in April 1984. Based on

TABLE 19

EXAMPLES OF TECHNICAL TASKS NOT REFERENCED TO EITHER POI C3ABR41130B-000, OR -002

TASKS	TNG EMP*	TASK DIFF	ALL 1-48 MONTHS TAFMS (N=239)	1-48 MONTHS TAFMS PERCENT MEMBERS PERFORMING			
				WEAPONS RELEASE PERSONNEL (N=27)	MSL SYS CHECKOUT PERSONNEL (N=151)	VACE PERSONNEL (N=23)	AISC PERSONNEL (N=17)
F334 REPAIR RADAR ANTENNA SURFACES	5.16	5.58	43	0	66	13	0
F340 REPLACE RACEWAY COVERS	5.00	4.73	51	0	78	13	0
F315 MEASURE ENVIRONMENTAL CONTROL SYSTEMS (ECS) LEAKAGE RATES	4.97	4.57	60	33	87	13	0
H408 PERFORM ROCKET MOTOR NITROGEN PRESSURE CHECKS	4.82	4.12	39	0	61	9	0
F341 REPLACE RADAR ANTENNA	4.53	6.01	27	0	41	13	0
H400 CHARGE NITROGEN IN ROCKET MOTORS	4.53	4.52	33	0	52	4	0
H435 REPLACE SAFING PIN ACCESS PLUGS	4.39	4.05	34	0	53	4	0
H424 REPLACE MOTOR ARM/DISARM SWITCHES	4.32	6.03	28	0	44	9	0
H405 PERFORM CONTROL SECTION WATER ACCUMULATION CHECKS	4.29	3.74	42	0	65	9	0
H425 REPLACE POWER SUPPLIES	4.26	4.62	39	0	82	13	0
H434 REPLACE SAFING PIN ACCESS PLUG LOCKING ELEMENTS	4.21	4.25	38	0	64	17	0
F343 UNPACK MISSILE COMPONENTS	3.53	3.44	50	0	76	13	0
G347 INSTALL MISSILES ON MISSILE DEFUEL STANDS	3.29	4.44	29	0	44	13	0
G348 INSTALL MISSILES ON MISSILE FUEL STANDS	3.26	4.44	30	0	46	13	0
G360 REMOVE MISSILES FROM DEFUEL STANDS	3.26	4.24	30	0	44	17	0
M751 PERFORM FAULT ISOLATION OF DESTINATION PRESET COMPUTERS	3.24	5.96	37	0	57	9	0
0840 REPAIR MRATA	3.13	3.13	9	0	0	96	0

* Average Training Emphasis = .94 with SD of 1.29 (High = 2.23)

** Average Task Difficulty = 5.00 with SD of 1.00

these findings, AFSC 31652T personnel were found covering a wide range of electronic principles in performing their job, while 31650T airmen covered only few electronic-related functions. Table 20 lists those electronic areas where 50 percent or more 31650T or 31652T airmen responded "yes" to performing these functions in their job. This data, as well as the complete data package for Chanute AFB AFSCs, can be extremely useful to subject-matter experts when evaluating those portions of the STS and POI concerning electronic fundamentals or principles.

SECTION III

ANALYSIS OF 411XOC DAFSC GROUPS

As explained in SECTION II, data pertaining to DAFSC groups is helpful in the analysis of each career ladder. The distribution of AFSC 411XOC skill level groups across career ladder jobs is displayed in Table 21, while Table 22 displays the relative percent time spent on each duty. With progression through the skill levels, the amount of time spent performing supervisory and managerial tasks increases. Correspondingly, time spent on duties involving the technical tasks generally declines.

Due to the small number of 3-skill level personnel involved in the survey, and the similarity in duty and tasks performance between 3- and 5-skill level groups, they will be discussed as a combined group.

Skill Level Descriptions

DAFSC 41130/50C. The 48 airmen in the 3- and 5-skill level groups represent 52 percent of all C-shred personnel surveyed. They perform an average of 260 tasks, with 205 tasks accounting for approximately 50 percent of their job time. Overall, these airmen perform a wide range of tasks, spending most their time on dispersal operations, administrative functions, and Launch Control Center maintenance (see Table 22). These airmen are predominantly stationed overseas and perform their duties out of a Main Operating Base (MOB). Typical tasks performed by these journeymen include performing critical function entry panel built-in tests (BIT), operating MAN vehicles M1013, M1014, troubleshooting ODEP, and camouflaging vehicles. For a more detailed job description see Table 23.

DAFSC 41170C. With advancement to the 7-skill level, personnel take on a more diverse role. While 38 percent of their time is still spent on technical duties, 62 percent of their time is now spent performing supervisory and administrative functions (see Table 22). 41170C airmen hold supervisory positions as either Air Force and Headquarters Managers or Section NCOICs and on the average supervise five other airmen. Technical positions held by these incumbents include working as LCC, TEL, or WCS Maintenance Technician or functioning as training systems support personnel. In contrast to their junior

TABLE 20

ELECTRONIC PRINCIPLES USED BY FIFTY PERCENT
OR MORE OF AFSC 41150B PERSONNEL

MATHEMATICS	NUMBERING SYSTEMS
*DIRECT CURRENT	LOGIC FUNCTION
RESISTANCE AND RESISTIVE CIRCUITS	COUNTERS
*METERS AND MULTIMETERS	TIMING CIRCUITS
ALTERNATING CURRENT	USE OF SIGNAL GENERATORS
CAPACITORS AND CAPACITIVE REACTANCE	MOTORS AND GENERATORS
TRANSFORMERS	*METER MOVEMENTS
MAGNETISM	WAVESHAPING CIRCUITS
*SOLDERING OR SOLDERLESS CONNECTIONS	MICROWAVE AMP & OSCILLATORS
RELAYS	REGISTERS
OSCILLOSCOPES	CABLE FABRICATION
TRANSISTORS	*INPUT/OUTPUT (PERIPHERAL) DEVICES
SOLID-STATE SPECIAL PURPOSE DEVICES	COMPUTER MICRO PROCESSORS AND PROGRAMS
POWER SUPPLIES	DB AND POWER RATIOS
OSCILLATORS	DIGITAL TO-ANALOG AND DIGITAL-TO-DIGITAL CONVERTERS

* Areas responded by both former AFSC 31650T and 31652T personnel
NOTE: All other areas responded only by former 31652T personnel

TABLE 21
DISTRIBUTION OF 411XOC DAFSC GROUP MEMBERS ACROSS CAREER LADDER JOBS
(NUMBER AND PERCENT RESPONDING)

CAREER LADDER JOBS	DAFSC 41130/50C (N=48)		DAFSC 41170C (N=44)	
	NO	PCT	NO	PCT
I B-52 WEAPONS RELEASE TECHNICIANS IJT (N=43)	1	2%	0	0%
II MISSILE SYSTEMS CHECKOUT PERSONNEL CLUSTER (N=252)	0	0%	1	2%
III VERIFICATION & CHECKOUT OF EQUIPMENT (VACE) PERSONNEL CLUSTER (N=70)	0	0%	0	0%
IV QUALITY ASSURANCE INSPECTORS IJT (N=13)	0	0%	1	2%
V AF/HQ MANAGERS IJT (N=13)	0	0%	5	11%
VI SECTION NCOIC PERSONNEL CLUSTER (N=55)	1	2%	6	14%
VII B1-B WEAPONS RELEASE TEAM CHIEFS IJT (N=6)	0	0%	0	0%
VIII MUNITIONS CONTROL PERSONNEL IJT (N=33)	3	6%	1	2%
IX MISSILE MAINTENANCE ANALYSIS PERSONNEL CLUSTER (N=35)	0	0%	0	0%
X MAINTENANCE SUPPLY LIAISON TECHNICIANS IJT (N=6)	0	0%	0	0%
XI FB-111A AIRCRAFT INTEGRATED SYSTEMS CHECKOUT PERSONNEL IJT (N=22)	0	0%	0	0%
XII RESIDENT COURSE INSTRUCTORS IJT (N=20)	0	0%	0	0%
XIII GLCM PERSONNEL CLUSTER	37	77%	17	39%
JOB TYPES WITHIN THE CLUSTER:				
A DISPERSAL TRAINING INSTRUCTORS	5	10%	0	0%
B LCC/TEL/WCS MAINTENANCE TECHNICIANS	19	40%	5	11%
C TRAINING SYSTEMS SUPPORT PERSONNEL	8	17%	8	18%
NOT GROUPED (N=19)	6	13%	13	29%
TOTAL	48	100%	44	99%

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

TABLE 22
RELATIVE PERCENT TIME SPENT ON DUTIES BY 411XOC DAFSC GROUPS

DUTIES	DAFSC 41130/50C (N=48)	DAFSC 41170C (N=44)
A ORGANIZING AND PLANNING	3	14
B DIRECTING AND IMPLEMENTING	5	12
C EVALUATING	1	9
D TRAINING	3	6
E PERFORMING ADMINISTRATIVE FUNCTIONS	16	19
F OPERATING AND MAINTAINING MISSILE SYSTEMS	*	*
G OPERATING AND MAINTAINING AGM-86B	*	*
H OPERATING AND MAINTAINING AGM-69A	*	*
I PERFORMING GENERAL FLIGHTLINE MAINTENANCE	*	*
J PERFORMING MAINTENANCE ON B-52	2	*
K PERFORMING MAINTENANCE ON FB-111	*	*
L PERFORMING OPERATIONAL CHECKS, SELF-TESTS, AND PERIODIC INSPECTIONS OF AGM-69A/AGM-86B TEST EQUIPMENT	*	*
M PERFORMING FAULT ISOLATION OF AGM-69A/AGM-86B ELECTRONIC COMPONENTS AND EQUIPMENT	*	*
N CALIBRATING AND ADJUSTING AGM-69A/AGM-86B ELECTRONIC EQUIPMENT	*	*
O REPAIRING AND SERVICING MISSILE ELECTRONIC EQUIPMENT AND COMPONENTS	*	*
P PERFORMING GENERAL SHOP MAINTENANCE	3	2
Q OPERATING AND MAINTAINING MISSILE PROCEDURES TRAINIER (MPT)	2	4
R PERFORMING LAUNCH CONTROL CENTER (LCC) RECEIPT INSPECTIONS	4	2
S PERFORMING TRANSPORTER ERECTOR LAUNCHER (TEL) RECEIPT INSPECTIONS	4	2
T PERFORMING TRANSPORTER ERECTOR LAUNCHER (TEL) MAINTENANCE	6	3
U PERFORMING LAUNCH CONTROL CENTER (LCC) MAINTENANCE	12	7
V PERFORMING LAUNCH CONTROL CENTER (LCC) CHECKS	2	1
W PERFORMING GROUND LAUNCHED CRUISE MISSILE (GLCM) GENERAL MAINTENANCE FUNCTIONS	5	2
X PERFORMING TECHNICAL ENGINEERING FUNCTIONS	*	3
Y OPERATING AND MAINTAINING GROUND LAUNCHED CRUISE MISSILES (GLCM) AND GENERAL PURPOSE VEHICLES	6	3
Z PERFORMING DISPERSAL OPERATION FUNCTIONS	23	9

* Less than 1 percent

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

TABLE 23

REPRESENTATIVE TASKS PERFORMED BY DAFSC 41130C
AND 41150C PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 41130/50C (N=48)
W1267 CONNECT FIBER OPTIC CABLES	75
E295 REVIEW AFTO FORMS 240 (GLCM EQUIPMENT STATUS RECORD)	71
U1206 PERFORM WEAPON CONTROL SYSTEMS (WCS) CHECKOUTS	69
U1207 PERFORM WCS POWER APPLICATION	69
W1288 PERFORM LCC STAND ALONE BIT	69
U1203 PERFORM ELECTRICAL POWER SYSTEM (EPS) POWER APPLICATION	67
V1258 PERFORM CRITICAL FUNCTION ENTRY PANEL BUILT-IN TESTS (BIT)	67
V1262 PERFORM OPERATOR DISPLAY AND ENTRY PANEL (ODEP) BIT	67
E208 MAKE ENTRIES ON AF FORMS 1800 (OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLE))	65
Y1381 OPERATE MAN VEHICLES M1013, M1014	65
Y1364 MATE MAN VEHICLE TO TRAILERS	63
U1237 REPLACE PRINTED CIRCUIT BOARDS OF OPERATORS DISPLAY AND ENTRY PANELS (ODEP)	60
U1251 TROUBLESHOOT ODEP	60
T1144 INSPECT TEL EQUIPMENT FOR DAMAGE	60
Z1416 CLEAN M-16 RIFLES	58
Z1410 CAMOUFLAGE VEHICLES	56
Z1464 INSTALL QUICK-RELEASE PINS IN TEL REAR DOORS	56
Z1497 PACK INDIVIDUAL EQUIPMENT	56
U1217 REPAIR CENTRAL DATA PROCESSING SETS (CDPS)	56
Z1424 CONSTRUCT FIGHTING POSITIONS	54
Y1393 PERFORM PMCS ON M-925/923 5-TON CARGO TRUCKS	52
Y1391 PERFORM MONTHLY PMCS ON MAN VEHICLES M1013, M1014	48
E266 MONITOR STATUS OF EQUIPMENT	42
B80 UPDATE STATUS BOARDS	38

counterparts, 7-skill level personnel were not found performing duties pertaining to training dispersal functions. Examples of tasks performed by 7-skill level airmen include counseling personnel on military-related matters, assigning work priorities, evaluating damage to missile surfaces, and investigating weapon system technical problems (see Table 24 for a more detailed job description).

Tasks which best distinguish these members from 3- and 5-skill level airmen are provided in Table 25. Again, the key difference is a greater emphasis on supervisory tasks for 7-skill level personnel.

Summary

Career ladder progression is well defined. Personnel at the 3- and 5-skill levels spend a majority of their time performing technical tasks, while supervisory and administrative functions become more characteristic of the 7-skill level job. Three and 5-skill level airmen work predominantly as LCC/TEL/WCS technicians overseas and spend a large portion of their time performing dispersal operation functions. Seven-skill level personnel are equally divided performing supervisory and technical functions in most job areas.

ANALYSIS OF 411XOC AFR 39-1 SPECIALTY DESCRIPTIONS

The results of the skill level and job structure analysis were compared with the AFR 39-1 Specialty Descriptions, dated 15 March 1985, for the Missile Systems Maintenance specialty. The descriptions in AFR 39-1 describe in broad terms the tasks and duties performed by members of the various skill-level groups of a career ladder. This survey supports these broad descriptions for AFSC 411XOC personnel. While depicting the technical aspect of the job, it also describes the increase in supervisory responsibilities previously described in the DAFSC analysis.

411XOC TRAINING ANALYSIS

As explained in SECTION II, occupational survey data provide one of several sources of information which can be used to make training programs more relevant and meaningful to students. The three most commonly used types of occupational survey information are: (1) the percent of first-enlistment personnel performing tasks covered in the job inventory, (2) ratings of relative difficulty of tasks, and (3) the ratings of relative emphasis which should be placed on tasks for first-enlistment training. These data can be used in evaluating training documents such as the Specialty Training Standard (STS) and the Plan of Instruction (POI).

TABLE 24

REPRESENTATIVE TASKS PERFORMED BY
DAFSC 41170C PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 41170C (N=44)
A3	CONDUCT BRIEFINGS	70
C115	PERFORM SELF-INSPECTIONS	66
B48	COUNSEL PERSONNEL ON MILITARY-RELATED MATTERS	64
B59	DRAFT CORRESPONDENCE	64
A4	CONDUCT MEETINGS	60
D157	MAKE ENTRIES ON AF FORMS 623A (ON-THE-JOB TRAINING RECORD- CONTINUATION SHEET)	59
B43	COMPILE DATA FOR REPORTS	57
A6	DETERMINE EQUIPMENT REQUIREMENTS	55
C119	WRITE APR	55
E182	DRAFT MESSAGES	52
A7	DETERMINE PERSONNEL REQUIREMENTS	43
C106	IDENTIFY PROBLEM AREAS USING MATERIAL QUALITY DEFICIENCY REPORTS	43
B82	WRITE RECOMMENDATIONS FOR CHANGES IN EQUIPMENT	41
B47	COORDINATE WORK BETWEEN DUTY SECTIONS	41
C107	IDENTIFY PROBLEM AREAS USING SERVICE REPORTS	41
T1186	VERIFY ALL SWITCH POSITIONS ON TEL CONTROL PANELS	39
I1200	INSTALL DATA TRANSPORT DEVICES (DTD)	39
U1206	PERFORM WEAPON CONTROL SYSTEMS (WCS) CHECKOUTS	39
V1259	PERFORM CRITICAL FUNCTION UNIT (CFU) BIT	39
C103	EVALUATE SUGGESTIONS	36
D139	DETERMINE TRAINING REQUIREMENTS	36
E304	UPDATE MMICS	32
X1321	INVESTIGATE WEAPON SYSTEM TECHNICAL PROBLEMS	32

TABLE 25

REPRESENTATIVE TASK DIFFERENCES BETWEEN DAFSC 41130C/50C AND DAFSC 41170C PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 41130/50C (N=48)	DAFSC 41170C (N=44)	DIFFERENCE
T1152 PERFORM ALARM CHECKS	63	20	+43
Y1364 MATE MAN VEHICLE TO TRAILERS	63	20	+43
Z1441 DISCONNECT FOC FROM TEL	56	16	+40
Z1507 PERFORM LOW CRAWL	54	14	+40
Z1584 TEAR DOWN CAMOUFLAGE EQUIPMENT	54	16	+40
Y1339 CHANGE TIRES ON MAN VEHICLES	56	18	+38
Z1410 CAMOUFLAGE VEHICLES	56	18	+38
Z1406 CAMOUFLAGE HASTY FIGHTING POSITIONS	54	18	+36
Z1527 POSITION VEHICLES BY COMPASS	50	14	+36
Z1435 DIG FOX HOLES	50	16	+34
S1138 PERFORM SYSTEM BIT	58	25	+33
W1272 INSPECT FIBER OPTIC PARTS	69	36	+33
B59 DRAFT CORRESPONDENCE	15	64	-49
A4 CONDUCT MEETINGS	15	59	-44
E182 DRAFT MESSAGES	13	52	-39
C103 EVALUATE SUGGESTIONS	2	36	-34
A11 DEVELOP JOB DESCRIPTIONS	6	39	-33
C119 WRITE APR	23	55	-32
C104 EVALUATE TECHNICAL DATA	15	41	-26

To aid in the evaluation of the 411XOC STS and POI, technical school personnel at Davis-Monthan AFB matched job inventory tasks to appropriate sections of the STS and POIs. With these matchings, comparisons to the training documents were accomplished. A complete computer listing displaying percent members performing tasks, and training emphasis ratings for each task, along with STS and POI matchings, has been forwarded to the technical school for its use in further detailed reviews of training documents. Summaries of that data and information are given below, preceded by an analysis of jobs performed by first-enlistment personnel.

AFSC 411XOC Training Emphasis

Training emphasis (TE) ratings are factors that can assist tech school personnel in deciding what tasks should be emphasized in entry-level training. TE ratings provided by career ladder subject-matter experts yielded an average rating of 1.32, with a standard deviation of 1.63. Therefore, tasks having a rating of 2.95 (average TE + 1 standard deviation) or better are considered highly recommended for structured training. For a complete discussion of TE, please refer back to the Task Factor Administration section of this report.

Table 26 shows tasks upon which subject-matter experts agree require some form of structured training for first-termers. As illustrated in Table 26, the majority of tasks rated highest in training emphasis pertain to performing Launch Control Center (LCC) maintenance and checks. Some examples include troubleshooting the random access storage set (RASS), troubleshooting the operators display and entry panel (ODEP), and performing weapon control systems (WCS) checkouts. Furthermore, these tasks are performed by substantial percentages of first-enlistment personnel. These findings agree with the data presented previously on ANALYSIS OF DAFSC GROUPS, which revealed large percentages of 3- and 5-skill level members performing tasks related to the LCC and the WCS. While reviewing this section of the report, note that tasks receiving high ratings on TE and accompanied by moderate to high percentages of members performing (30 percent or better) in the first-enlistment group may justify resident training. Training decisions such as these are not only weighed against these factors, but also take into account command concerns, safety standards, and the importance of the task.

Analysis of 411XOC 1-48 Months TICF

Since airmen can enter AFSC 411XOC either directly from basic training or as crosstrainees from other specialties in the missile career field, it is most appropriate to examine the group of airmen with 1-48 months TICF (rather than 1-48 months TAFMS). Within the AFSC 411XOC specialty, 59 members have between 1 and 48 months time in the career field. These personnel comprise 64 percent of the 411XOC survey sample and are distributed across one cluster and three independent job types as illustrated Figure 6. The largest concentration of personnel is contained within the LCC/TEL/WCS maintenance function. The fact that most 1-48 months TICF 411XOC airmen (69 percent) grouped within one cluster, supports the idea that the C-shred specialty is a homogeneous group. Of the 228 average number of tasks performed by these airmen, typical tasks include connecting fiber optic cables, performing WCS checkouts,

TABLE 26

TASKS RATED HIGHEST IN TRAINING EMPHASIS (TE) FOR AFSC 411XOC PERSONNEL
(GREATER THAN 1 STANDARD DEVIATION ABOVE THE AVERAGE)

TASKS	TRAINING EMPHASIS*	PERCENT MEMBERS PERFORMING 1-48 MONTHS TICF (N=59)
U1206 PERFORM WEAPON CONTROL SYSTEMS (WCS) CHECKOUTS	6.24	56
U1254 TROUBLESHOOT RASS	6.07	49
T1154 PERFORM TEL OPCERT	6.03	41
U1251 TROUBLESHOOT ODEP	6.00	51
T1155 PERFORM TEL POSTMAINTENANCE	5.97	53
U1246 TROUBLESHOOT CDPS	5.93	47
U1252 TROUBLESHOOT ODEP USING DIAGNOSTIC SOFTWARE	5.93	49
V1262 PERFORM OPERATOR DISPLAY AND ENTRY PANEL (ODEP) BIT	5.90	56
V1263 PERFORM RANDOM ACCESS STORAGE SYSTEM (RASS) BIT	5.90	56
U1256 TROUBLESHOOT STU USING DIAGNOSTIC SOFTWARE	5.86	47
U1207 PERFORM WCS POWER APPLICATION	5.83	56
U1208 PERFORM WCS POWER SHUTDOWNS	5.83	56
V1266 PERFORM 1666 DATA PROCESSING SET (DPS) BIT	5.83	53
V1261 PERFORM LCC OPCERTS	5.76	44
V1264 PERFORM SIGNAL TRANSFER SYSTEM (STS) BIT	5.76	56
V1265 PERFORM STANDBY CONTROL PANEL (SCP) BIT	5.76	56
U1247 TROUBLESHOOT CFEP	5.72	49
U1255 TROUBLESHOOT SCP	5.72	47
U1248 TROUBLESHOOT CFU	5.69	49
V1258 PERFORM CRITICAL FUNCTION ENTRY PANEL BUILT-IN TESTS (BIT)	5.69	56
U1215 REMOVE DTD	5.66	56

* Average Training Emphasis = 1.32 with S.D. 1.63 (High = 2.95)

DISTRIBUTION OF 411XOC PERSONNEL (1-48 MOS TICF) ACROSS MAJOR SPECIALTY JOBS

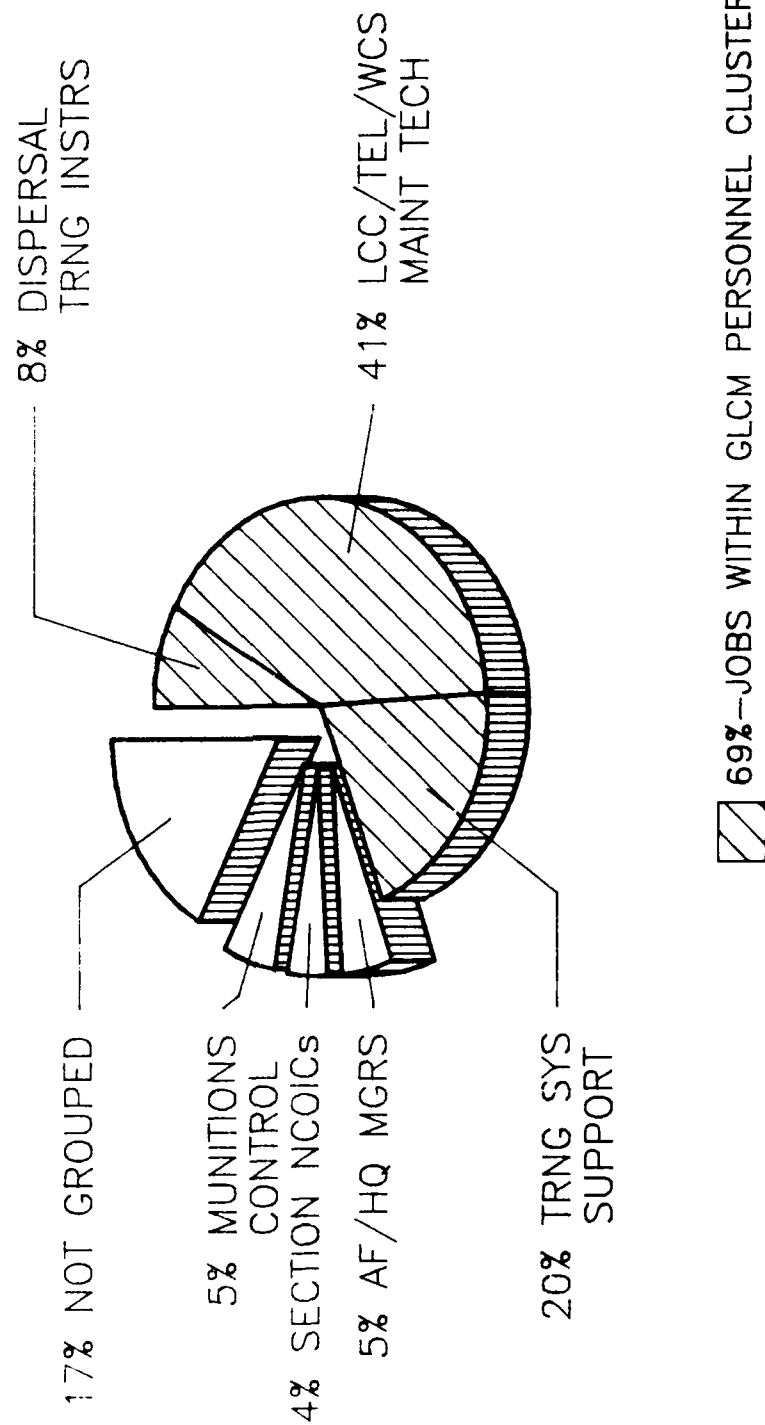


FIGURE 6

inspecting TEL signal transfer units (A9), erecting camouflage, and cleaning M-16 rifles. A more detailed list of representative tasks is contained in Table 27, while Table 28 shows the relative percent time spent on duties by these first- enlistment airmen.

411XOC Specialty Training Standard (STS)

A comprehensive review of STS 411XOC, Missile Systems Maintenance specialty, dated February 1986, was made by comparing STS elements to survey data. STS elements containing general career ladder knowledge and information were not reviewed. The remaining elements were reviewed in terms of training emphasis and percent members performing information as stipulated in ATCR 52-22, dated 8 December 1986. Typically, tasks performed by 20 percent or more of personnel in appropriate experience or skill level groups such as 1-48 months TICF experience groups, and 5- and 7-skill level groups, should be considered for inclusion in the STS.

With only one exception, occupational survey data supported all STS elements with the criteria discussed above. Element 13f(3) pertaining to emergency procedures, checking fuel leaks in the all up round (AUR), was not supported, having less than 16 percent performance across all career ladder groups. However, due to the nature of this element, training personnel and subject-matter experts may determine that safety considerations require that this element remain in the STS.

Several tasks from the job inventory were not matched to the STS. The large majority of unreferenced tasks referred to functions typical of the 411XOB specialty. Examples of technically-oriented tasks performed by greater than 20 percent of C-shred airmen and not referenced to the STS include performing TEL pre- and postmaintenance, repairing the critical function unit (CFU), and inspecting interconnecting LCC cables. Further examples are listed in Table 29. Generally, such tasks not referenced should be covered by some existing element or a new item could be added to the STS.

411XOC Plan of Instruction (POI)

Based on assistance from technical school subject-matter experts in matching job inventory tasks to POI J4ALF41130C, dated 1 Jun 86, occupational survey data were matched to related training objectives. A similar method to that of the STS analysis was used to review the POI. The specific data examined included percent members performing data for 1-48 months TICF personnel and training emphasis (TE) ratings for the matched tasks.

Of the 46 POI objectives that were matched with survey data, five were not supported, having fewer than 30 percent of 1-48 months TICF personnel indicating performing the matched tasks. This equates to 30 out of 204 total course hours. In general, areas not supported include Material Deficiency Reports, 15K Forklifts, and the Weapons Control System (WCS). These five objectives along with performance data are listed in Table 30.

TABLE 27

REPRESENTATIVE TASKS PERFORMED BY AFSC 411XOC
1-48 MONTHS TICF PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=59)
W1267 CONNECT FIBER OPTIC CABLES	61
E206 MAKE ENTRIES ON AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	59
U1207 PERFORM WCS POWER APPLICATION	56
U1208 PERFORM WCS POWER SHUTDOWNS	56
U1206 PERFORM WEAPON CONTROL SYSTEMS (WCS) CHECKOUTS	56
V1263 PERFORM RANDOM ACCESS STORAGE SYSTEM (RASS) BIT	56
V1262 PERFORM OPERATOR DISPLAY AND ENTRY PANEL (ODEP) BIT	56
U1203 PERFORM ELECTRICAL POWER SYSTEM (EPS) POWER APPLICATION	54
U1204 PERFORM EPS SHUTDOWNS	54
V1266 PERFORM 1666 DATA PROCESSING SET (DPS) BIT	53
U1257 VISUALLY INSPECT EXTERNAL SURFACES OF LCC	49
EC231 MAKE ENTRIES ON AFTO FORMS 240 (GLCM EQUIPMENT STATUS RECORD)	47
Z1416 CLEAN M-16 RIFLES	47
Y1393 PERFORM PMCS ON M-925/923 5-TON CARGO TRUCKS	44
Z1580 TAKE CRITICAL VEHICLE HEADINGS	44
Z1446 ERECT CAMOUFLAGE	42
S1134 INSPECT TEL SIGNAL TRANSFER UNITS (A9)	42
B47 COORDINATE WORK BETWEEN DUTY SECTIONS	41
D157 MAKE ENTRIES ON AF FORMS 623A (ON-THE-JOB TRAINING RECORD-CONTINUATION SHEET)	37
E269 MONITOR STATUS OF VEHICLES	36

TABLE 28
PERCENT TIME SPENT ON DUTIES
BY AFSC 411XOC PERSONNEL
(1-48 MONTHS TICF)

DUTIES	PERCENT TIME SPENT (N=59)
A ORGANIZING AND PLANNING	7
B DIRECTING AND IMPLEMENTING	9
C EVALUATING	4
D TRAINING	4
E PERFORMING ADMINISTRATIVE FUNCTIONS	18
F OPERATING AND MAINTAINING MISSILE SYSTEMS	*
G OPERATING AND MAINTAINING AGM-86B	*
H OPERATING AND MAINTAINING AGM-69A	*
I PERFORMING GENERAL FLIGHTLINE MAINTENANCE	*
J PERFORMING MAINTENANCE ON B-52	*
K PERFORMING MAINTENANCE ON FB-111	*
L PERFORMING OPERATIONAL CHECKS, SELF-TESTS, AND PERIODIC INSPECTIONS OF AGM-69A/AGM-86B TEST EQUIPMENT	*
M PERFORMING FAULT ISOLATION OF AGM-69A/AGM-86B ELECTRONIC COMPONENTS AND EQUIPMENT	*
N CALIBRATING AND ADJUSTING AGM-69A/AGM-86B ELECTRONIC EQUIPMENT	*
O REPAIRING AND SERVICING MISSILE ELECTRONIC EQUIPMENT AND COMPONENTS	*
P PERFORMING GENERAL SHOP MAINTENANCE	2
Q OPERATING AND MAINTAINING MISSILE PROCEDURES TRAINER (MPT)	3
R PERFORMING LAUNCH CONTROL CENTER (LCC) RECEIPT INSPECTIONS	3
S PERFORMING TRANSPORTER ERECTOR LAUNCHER (TEL) RECEIPT INSPECTIONS	3
T PERFORMING TRANSPORTER ERECTOR LAUNCHER (TEL) MAINTENANCE	5
U PERFORMING LAUNCH CONTROL CENTER (LCC) MAINTENANCE	10
V PERFORMING LAUNCH CONTROL CENTER (LCC) CHECKS	2
W PERFORMING GROUND LAUNCHED CRUISE MISSILE (GLCM) GENERAL MAINTENANCE FUNCTIONS	4
X PERFORMING TECHNICAL ENGINEERING FUNCTIONS	1
Y OPERATING AND MAINTAINING GROUND LAUNCHED CRUISE MISSILES (GLCM) AND GENERAL PURPOSE VEHICLES	6
Z PERFORMING DISPERSAL OPERATION FUNCTIONS	18

* Less than 1 percent

TABLE 29

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

TASKS	PERCENT MEMBERS PERFORMING			TRAINING EMPHASIS*
	1ST ENL (N=13)	DAFSC 41150C (N=47)	DAFSC 41170C (N=44)	
Q977 PERFORM MPT SHUTDOWNS	20	21	21	1.83
R1100 INSPECT LCC INTERCONNECTING CABLES	27	34	23	2.97
T1155 PERFORM TEL POSTMAINTENANCE	53	66	36	5.97
T1156 PERFORM TEL PREMAINTENANCE	53	66	34	5.62
T1186 VERIFY ALL SWITCH POSITIONS ON TEL CONTROL PANELS	49	62	39	5.10
T1143 INHIBIT TEL AUDIO ALARMS	49	62	30	4.69
T1153 PERFORM OPERATIONAL CHECKOUT OF TEL FIELD PHONES	29	40	20	4.00
T1180 REPLACE TEL INTERFACE CONTROL UNITS (TICU)	36	43	20	3.97
U1248 TROUBLESHOOT CFU	49	57	32	5.69
U1219 REPAIR CRITICAL FUNCTION UNITS (CFU)	47	53	32	4.72

* Average Training Emphasis = 1.32 with SD of 1.63 (High = 2.95)

TABLE 30
LOW PERFORMANCE AFSC 411X0C POI OBJECTIVES

POI J4ALF41130C-001		1-48 MONTHS TICF PERCENT PERFORMING*
I 4e	Identify basic facts and terms of the Material Deficiency Reporting (MDR) system. E288 Prepare Material Deficiency Reports E264 Make entries on SF Forms 368 (Quality Deficiency Report)	24 5
I 5c	Given 15K forklift, support equipment and cargos, move cargo through a given course. P953 Transport equipment using forklifts	20
I 6k	Given a T0, tool box, handling equipment, TEL trainer, and working as a team member, remove and install WCS components. O860 Replace circuit breakers O875 Replace electrical cables	0 0
I 6i	Given a T0, tool box, handling equipment, TEL trainer, and working as a team member, troubleshoot 5 WCS malfunctions. X1323 Isolate signal flow in WCS using schematics	15
I 8b	Given a T0, TEL, support equipment, working as a team member, and complying with nuclear surety requirements, troubleshoot 5 TEL WCS malfunctions. Q1070 Troubleshoot WCS	20

In accordance with ATCR 52-22, and in the interest of cost-effectiveness, objectives where the probability of first-enlistment performance is less than 30 percent, should not be taught in a resident training course without further justification. Training personnel should consider evaluating these five objectives.

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 31. Some of these tasks deal with performing the WCS power-up, performing TEL postmaintenance, and installing access doors. In addition to many members performing these functions, several of these tasks were rated high in terms of training emphasis. Training personnel should carefully review these unreferenced tasks to determine the necessity for training and the most effective method of accomplishing it.

SECTION IV

JOB SATISFACTION ANALYSIS

Comparisons of job satisfaction across groups provide career ladder managers with a means toward understanding some of the factors affecting job performance of today's airmen. These perceptions are gathered from incumbents' responses to five job satisfaction questions covering job interest, perceived utilization of talents, perceived utilization of training, sense of accomplishments, and reenlistment intentions. The responses of the current survey sample are then analyzed by making several comparisons: (1) across specialty job groups identified in the SPECIALTY JOBS section of this report, (2) among TAFMS groups of a comparative sample of personnel from other Mission Equipment Maintenance specialties surveyed in 1986 (AFSCs 309X0, 404X0, 411X0A, 411X1A, 431X0C, 432X0D, and 462X0), and (3) between current and previous survey TAFMS groups.

Table 32 presents job satisfaction data for the specialty jobs. An examination of these data can show how overall job satisfaction may be influenced by the type of job performed. With such a variety of jobs as in the 411X0B specialty, it is virtually impossible to train personnel for every possible function. Therefore, perceived utilization of training is of particular interest. Percentages reflected in this category show that the majority of personnel in three jobs (B-52 Weapons Release Technicians, Munitions Control Personnel, and Missile Maintenance Analysis Personnel) and 50 percent in one job (Maintenance Supply Liaison Technicians), perceived little or no use of their training. Telephone discussions and write-in comments from personnel operating in these areas suggest that a reason for their discontent is that they are "being trained to perform a technical function, and then not performing it." Specifically, airmen functioning as a Munitions Controller, Missile Maintenance Analyst, or Maintenance Supply Liaison Technician, perform

TABLE 31

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 30 PERCENT OR MORE
AFSC 411XOC 1-48 MONTHS TICF MEMBERS AND NOT REFERENCED TO THE POI

TASKS	PERCENT MEMBERS PERFORMING	
	1-48 MOS TICF (N=59)	TRAINING EMPHASIS
R1111 INSPECT STANDBY CONTROL PANELS	41	3.59
R1112 INSTALL CAMOUFLAGE	31	3.48
R1116 PERFORM WCS POWER-UP	41	4.59
R1113 INSTALL LCC STAIRS	37	2.28
R1081 INSPECT BACKSHELLS	31	2.45
T1155 PERFORM TEL POSTMAINTENANCE	53	5.97
T1156 PERFORM TEL PREMAINTENANCE	53	5.62
T1186 VERIFY ALL SWITCH POSITIONS ON TEL CONTROL PANELS	49	5.10
T1176 REPLACE SIGNAL TRANSFER UNITS (STU)	47	5.00
T1175 REPLACE SIGNAL DATA TRANSLATOR UNITS 1 THRU 4	47	4.93
T1143 INHIBIT TEL AUDIO ALARMS	49	4.69
U1254 TROUBLESHOOT RASS	49	6.07
U1251 TROUBLESHOOT ODEP	51	6.00
U1252 TROUBLESHOOT ODEP USING DIAGNOSTIC SOFTWARE	49	5.93
U1256 TROUBLESHOOT STU USING DIAGNOSTIC SOFTWARE	47	5.86
U1248 TROUBLESHOOT CFU	56	5.69
W1272 INSPECT FIBER OPTIC PARTS	56	4.76
W1268 DEPLOY LCC ANTENNAS	37	3.86

* Average Training Emphasis = 1.32 with SD of 1.63 (High = 2.95)

TABLE 32

JOB SATISFACTION DATA BY CAREER LADDER JOBS
(PERCENT MEMBERS RESPONDING)

	B-52 WPN RELEASE TECH IJT (N=43)	MISSILE SYS CHECKOUT PERSONNEL CLUSTER (N=252)	VACE PERSONNEL CLUSTER (N=70)	QUALITY ASSURANCE INSPECTORS IJT (N=13)	AF/HQ MANAGERS IJT (N=13)	SECTION NCOIC PERSONNEL IJT (N=55)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	63	61	81	85	85	73
SO-SO	14	21	13	15	0	15
DULL	21	17	4	0	8	13
<u>PERCEIVED USE OF TALENTS:</u>						
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	60 37	72 28	84 16	85 15	85 8	80 20
<u>PERCEIVED USE OF TRAINING:</u>						
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	35 63	84 15	85 13	92 8	69 23	78 22
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>						
SATISFIED	56	56	71	69	85	69
NEUTRAL	14	16	10	15	0	7
DISSATISFIED	28	27	19	15	8	24
<u>REENLISTMENT INTENTIONS:</u>						
WILL/PROBABLY WILL REENLIST WILL NOT/PROBABLY WILL NOT REENLIST WILL RETIRE	47 51 2	62 37 *	66 34 0	100 0 0	77 15 8	67 16 15

* Less than 1 percent

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

TABLE 32 (CONTINUED)

JOB SATISFACTION DATA BY CAREER LADDER JOBS
(PERCENT MEMBERS RESPONDING)

	B1-P WEAPONS RELEASE TEAM CHIEFS IJT (N=6)	MUNITIONS CONTROL PERSONNEL IJT (N=33)	MISSILE MAINT ANALYSIS PERSONNEL CLUSTER (N=35)	MAINT SUPPLY LIAISON TECH IJT (N=6)	FB-111A AISC PERSONNEL IJT (N=22)	RESIDENT COURSE INSTRS IJT (N=20)	GLCM PERSONNEL CLUSTER (N=54)
<u>EXPRESSED JOB INTEREST:</u>							
INTERESTING	100	85	57	50	68	80	46
SO-SO	0	9	23	33	18	0	24
DULL	0	6	17	17	9	20	22
<u>PERCEIVED USE OF TALENTS:</u>							
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	83 17	82 18	49 49	50 50	82 18	75 25	46 48
<u>PERCEIVED USE OF TRAINING:</u>							
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	83 17	39 61	31 66	50 50	68 32	95 5	44 50
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>							
SATISFIED	100	73	54	50	77	65	37
NEUTRAL	0	9	11	33	9	5	19
DISSATISFIED	0	18	31	17	14	30	39
<u>REENLISTMENT INTENTIONS:</u>							
WILL/PROBABLY WILL REENLIST	83	70	57	50	36	55	69
WILL NOT/PROBABLY WILL NOT REENLIST	17	30	34	50	64	30	26
WILL RETIRE	0	0	9	0	0	10	2

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

a more administrative or analytical job than a technical one. Overall, job satisfaction indicators for two of these jobs, Missile Maintenance Analysts and Maintenance Supply Liaison Technicians, are consistently lower when compared to other jobs.

Job satisfaction data collected for the GLCM Job indicates low satisfaction across all factors, with the exception of a 69 percent reenlistment intention (see Table 32). Telephone conversations with AFSC 411XOC airmen suggest that a reason for their discontent is not being able to perform the spectrum of functions trained on when initially assigned to an operational unit. In addition, discussions with 512th FTD personnel revealed that for a period of time, AFSC 411XOC airmen were not authorized to perform many maintenance procedures until technical orders for the specialty were verified. In the interim, these functions were performed by contractors.

First-enlistment (1-48 months TAFMS), second-enlistment (49-96 months TAFMS), and career (97+ months TAFMS) group data for AFSC 411XOB specialty are listed in Table 33, and are compared to corresponding enlistment groups from other Mission Equipment Maintenance ASFCs surveyed in 1986. Generally, the enlistment groups of both the current sample and comparative sample indicate very similar job satisfaction levels. One notable difference is that 49-96 months TAFMS 411XOB personnel indicate a lower reenlistment intention (59 percent) when compared to the comparative sample (73 percent).

Job satisfaction data of former 316XOT and 316X2T personnel (from 1979) and current 411XOB personnel are listed in Table 34. Comparisons across 411XOB and former 316XOT TAFMS groups are presented first, followed by comparisons across 411XOB and 316X2T TAFMS groups.

A comparison of 411XOB airmen with former 316XOT airmen shows that job interest across all 411XOB TAFMS groups has increased since 1979. Similarly, 411XOB first-enlistment airmen indicate a lower perceived use of training, while 411XOB second-enlistment and career groups show higher perceived use of training. Finally, 411XOB reenlistment intentions are higher across the board than the previous 316XOT sample.

An examination of 411XOB personnel and former 316X2T personnel, indicate that job interest for career group members (97+ months TAFMS) has increased since 1979. Also, 411XOB first-enlistment members indicate a slight increase in job interest, while 411XOB second-enlistment airmen show a slight decrease. Perceived utilization of training in both 411XOB first-enlistment and career groups, has decreased, while a slight increase is noted across second-enlistment group members. In light of this, reenlistment intentions have increased in first- and second-enlistment groups with a slight decrease indicated across career group members.

Similar TAFMS data matched with comparative data, are listed in Table 35 for AFSC 411XOC specialty. In contrast, AFSC 411XOC personnel generally had lower job satisfaction levels than the comparative sample. This is demonstrated in the areas of job interest, utilization of talents, and perceived use of training. Particularly, the first-enlistment group had very low levels of satisfaction. Again, this dissatisfaction may have stemmed from the lack of

TABLE 33

COMPARISON OF JOE SATISFACTION DATA BY AFSC 411XOB AND COMPARATIVE SAMPLE GROUPS*
(PERCENT MEMBERS RESPONDING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	411XOB (N=239)	1986 COMP SAMPLE (N=3,924)	411XOB (N=153)	1986 COMP SAMPLE (N=2,613)	411XOB (N=188)	1986 COMP SAMPLE (N=3,573)
JOB INTERESTING	63	64	67	62	74	72
TALENTS WELL UTILIZED	69	72	72	71	79	80
TRAINING WELL UTILIZED	75	81	71	78	71	74
SATISFIED WITH ACCOMPLISHMENTS	58	64	63	61	66	67
LIKELY TO REENLIST	52	55	59	73	77	75

* Comparative Sample of Mission Equipment Maintenance career ladders surveyed in 1986 (includes AFSC 304X4, 309X0, 361X0, 404X0, 411X0A, 411X1A, 431X0C, 431X0D, 462X0)

TABLE 34

COMPARISON OF AFSC 411X0B JOB SATISFACTION DATA FOR CURRENT AND PREVIOUS SURVEY
(PERCENT MEMBERS RESPONDING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	1987	1979	1987	1979	1987	1979
JOB INTERESTING	63	48	67	46	74	64
TALENTS WELL UTILIZED	69	54	72	61	79	69
TRAINING WELL UTILIZED	75	94	71	49	71	64
SATISFIED WITH ACCOMPLISHMENTS	58	*	63	*	66	*
LIKELY TO REENLIST	52	29	59	51	77	70
						80

* Data not collected

TABLE 35

COMPARISON OF JOB SATISFACTION INDICATORS BY AFSC 411XOC AND COMPARATIVE SAMPLE GROUPS*
(PERCENT MEMBERS RESPONDING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	411XOC (N=13)	1986 COMP SAMPLE (N=3,924)	411XOC (N=28)	1986 COMP SAMPLE (N=2,613)	411XOC (N=51)	1986 COMP SAMPLE (N=3,573)
JOB INTERESTING	31	64	50	62	61	72
TALENTS WELL UTILIZED	23	72	43	71	73	80
TRAINING WELL UTILIZED	31	81	43	78	55	74
SATISFIED WITH ACCOMPLISHMENTS	23	64	39	61	53	67
LIKELY TO REENLIST	46	55	64	73	76	75

* Comparative Sample of Mission Equipment Maintenance career ladders surveyed in 1986 (includes AFSC 304X4, 309X0, 361X0, 404X0, 411X0A, 411X1A, 431X0C, 431X0D, 462X0)

authority in performing some functions as was described previously in this section. It is interesting to note that reenlistment intentions among junior level personnel were below comparative data levels, but that senior level personnel indicated slightly higher intentions than their comparative counterparts.

In summary, it appears that, although job satisfaction measures are not seriously deficient overall, there are some areas for possible concern. Most of the indicated dissatisfaction among the B-shred specialty may be a product of the diversity of the specialty and training process. Similarly, dissatisfaction among C-shred personnel may be attributed to not being able to perform the spectrum of functions trained on. It may be worthwhile for senior management personnel to take a close look at the issues and consider possible improvements.

IMPLICATIONS

This survey was conducted to provide information which may be used to update current AFSC 411X0B and AFSC 411X0C training programs and assess if former Missile Systems Electronic Equipment Specialists (AFSC 316X2T) have integrated with former Missile Systems Analysts (AFSC 316X0T).

In terms of the 411X0B STS and POIs, survey data suggest that a review is necessary. The B-shred STS was found to cover many areas which were being performed by less than 20 percent of career ladder personnel. Additionally, several tasks with relatively high percent members performing were not covered. Likewise, the B-shred POIs reflected many areas with low performance, and several unreferenced tasks with high performance. Due to the variety of jobs in this specialty, an alternative approach for the review was suggested. This examination across specialty jobs lend support to some areas which were otherwise not supported.

Training documents for AFSC 411X0C specialty were well supported, with a few exceptions. Areas in the POI relating to material deficiency reports, 15K forklifts, and the WCS were unsupported by survey data. Furthermore, several unreferenced tasks had high percent members performing.

An analysis of the utilization of former 316X0T and 316X2T personnel, revealed that these incumbents have not been fully integrated into the specialty. Seventy-two percent of former 316X0T airmen are still working as Missile Systems Checkout Personnel, while 80 percent of 316X2T airmen are still working as Verification and Checkout of Equipment Specialists (their former jobs).

In summary, AFSC 411X0B Missile Systems Maintenance specialty was found to be quite diverse. This diversity may be the cause of some of the indicated problems. These factors coupled with already low perceived utilization of training suggest that a review of the 411X0B training program is in order.

APPENDIX A

SELECTED REPRESENTATIVE TASKS PERFORMED BY
CAREER LADDER SPECIALTY JOB GROUPS

TABLE I

B-52 WEAPONS RELEASE TECHNICIANS
GRP089

GROUP SIZE: 43
 PREDOMINATE PAYGRADES: E-3
 MONTHS PERCENT OF SAMPLE: 6%

AVERAGE TIME IN JOB: 24 MONTHS
 AVERAGE TAFMS: 47
 AVERAGE TICF: 43 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
J468 INSPECT MAU-175/A	98
J498 PERFORM SELF-TEST ON WEAPON PRELOAD TESTERS (WPT)	98
J512 REPAIR MAU-6/A	98
J503 REPAIR AGM-69A PIN ACTUATORS	93
J490 PERFORM MAU-6/A CLIP-IN RACK RIGGINGS	91
J477 PERFORM AIU BOMB BAY DOOR CHECKOUTS	91
J476 PERFORM AIRCRAFT POWER APPLICATIONS	86
I443 PERFORM AIRCRAFT PHASE 1 INSPECTIONS	86
I446 PERFORM CRITICAL CIRCUIT MAINTENANCE CHECKS (CCMC)	84
J523 REPLACE BOMB RELEASE INTERVAL CONTROLS (BRIC)	84
I449 PERFORM PHYSICAL INSPECTION OF AIRCRAFT	77
J502 REMOVE DATA TRANSFER UNIT CARTRIDGES	74
J522 REPLACE BOMB INDICATOR LIGHTS	74
E236 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	72
J559 TROUBLESHOOT CLIP-IN WEAPON (NUCLEAR) SYSTEMS	72
I444 PERFORM AIRCRAFT PHASE 2 INSPECTIONS	65
J479 PERFORM B-52 OFFENSIVE AVIONICS SYSTEM (OAS) FAULT DATA RETRIEVALS	63
E243 MAKE ENTRIES ON AFTO FORMS 781 (AEROSPACE VEHICLE FLIGHT DATA DOCUMENT)	60
J487 PERFORM LAUNCHER PYLON SIMULATOR CHECKS	58
P929 INSTALL SAFETY DEVICES (PINS, CHOCKS, FLAGS)	58
P954 TRANSPORT EQUIPMENT USING VEHICLES OTHER THAN FORKLIFTS	56
C111 PERFORM EQUIPMENT INSPECTIONS	54
P950 STENCIL IDENTIFIERS ON EQUIPMENT	49
P948 REMOVE SNOW, ICE, OR DIRT FROM WORK SITES	47
F323 PERFORM CORROSION INSPECTIONS	44
I448 PERFORM MISSILE SIMULATOR CHECKS	39

TABLE II
MISSILE SYSTEMS CHECKOUT PERSONNEL
GRP032

GROUP SIZE: 252	AVERAGE TIME IN JOB: 24 MONTHS
PREDOMINATE PAYGRADES: E-3/4/5	AVERAGE TAFMS: 50 MONTHS
PERCENT OF SAMPLE: 38%	AVERAGE TICF: 41 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
F310 CLEAN MISSILE SURFACES	97
F327 PERFORM LEVEL 1 MISSILE CHECKOUTS	97
F328 PERFORM LEVEL 2 MISSILE CHECKOUTS	94
F311 EVALUATE DAMAGE TO MISSILE SURFACES	90
F312 ISOLATE FAULTS TO MISSILE SYSTEMS	90
F313 ISOLATE MALFUNCTIONS TO MISSILE COMPONENTS	88
F318 MIX SEALANTS	88
H410 PERFORM ROLL TRANSFER TO AND FROM MISSILE TEST STANDS	87
H409 PERFORM ROLL TRANSFER TO AND FROM MISSILE HARD STANDS	85
F309 APPLY SEALERS	84
F340 REPLACE RACEWAY COVERS	81
H411 PERFORM ROLL TRANSFER TO AND FROM MISSILE TRAILERS	80
M778 PERFORM LOADED SRAM LAUNCHER CHECKOUTS	77
H403 FILL AND SAND SILICONE INSULATION	74
F307 APPLY FILLERS	72
E301 TAG UNSERVICEABLE EQUIPMENT	70
E236 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	69
H405 PERFORM CONTROL SECTION WATER ACCUMULATION CHECKS	68
P937 PAINT EQUIPMENT	68
F342 REPLACE UMBILICAL RECEPTACLE SEALS	67
H417 REPLACE ELECTRONIC SECTION SHELLS	66
P929 INSTALL SAFETY DEVICES (PINS, CHOCKS, FLAGS)	63
F338 REPLACE MISSILE BATTERIES	59
G350 INSTALL MISSILES ON MISSILE WORK STANDS	58
M777 PERFORM LOADED ALCM PYLON CHECKOUTS	45
O956 APPLY FACILITY AIR	44
G388 REPLACE MISSILE ACCESS PANELS	42
F404 OPERATE ENVIRONMENTAL CONTROL UNITS (ECU)	37

TABLE III
VERIFICATION AND CHECKOUT OF EQUIPMENT PERSONNEL
GRP055

GROUP SIZE: 70	AVERAGE TIME IN JOB: 31 MONTHS
PREDOMINATE PAYGRADES: E-4, E-5	AVERAGE TAFMS: 74 MONTHS
PERCENT OF SAMPLE: 10%	AVERAGE TICF: 62 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
P919 CLEAN ELECTRONIC TEST EQUIPMENT	96
M771 PERFORM FAULT ISOLATION ON MISSILE RADAR ALTIMETER TEST	93
N803 CALIBRATE MISSILE RADAR ALTIMETER TEST ASSEMBLIES (MRATA)	93
0840 REPAIR MRATA	93
N800 CALIBRATE ESTS (AN/GSM-263 AND AN/GSM-263A)	91
P949 REPAIR ELECTRICAL CONNECTORS	91
0838 REPAIR ESTS (AN/GSM-263 AND AN/GSM-263A)	90
E236 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	87
L661 PERFORM OPERATIONAL ASSURANCE TESTS (OAT) ON ESTS	87
L652 PERFORM ESTS CONFIDENCE TESTS	86
M768 PERFORM FAULT ISOLATION ON ESTS (AN/GSM-263 AND AN/GSM- 263A)	86
L649 PERFORM CERTIFICATION OF SAFE STATE TESTERS (SST)	84
L681 PERFORM PERIODIC INSPECTIONS OF MISSILE RADAR ALTIMETER	84
L696 PERFORM PERIODIC INSPECTIONS ON OF-81 ADAPTER GROUPS	76
L686 PERFORM PERIODIC INSPECTIONS ON AN/GSM-263 ELECTRONIC	74
M730 PERFORM ELECTRICAL CHECK OF LAUNCHER ROTATION TOOLS	73
L684 PERFORM PERIODIC INSPECTIONS ON A/E32T MISSILE TEST STANDS	69
L653 PERFORM FUNCTIONAL TESTS OF ELECTRONIC COMPONENTS COOLING EQUIPMENT (MXU-690/E)	64
L669 PERFORM PERIODIC INSPECTIONS OF A/E-24T-149 PYLON LAUNCHER MISSILE SIMULATOR WPT	56

TABLE IV
QUALITY ASSURANCE INSPECTORS
GRP079

GROUP SIZE: 13	AVERAGE TIME IN JOB: 24 MONTHS
PREDOMINATE PAYGRADES: E-6, E-7	AVERAGE TAFMS: 136 MONTHS
PERCENT OF SAMPLE: 2%	AVERAGE TICF: 117 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
A4 CONDUCT MEETINGS	100
C88 EVALUATE DUTY PERFORMANCE OF PERSONNEL	100
C111 PERFORM EQUIPMENT INSPECTIONS	100
C113 PERFORM QUALITY CONTROL INSPECTIONS	100
C96 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS	92
C117 PERFORM TECHNICAL INSPECTIONS	92
E215 MAKE ENTRIES ON AF FORMS 2419 (ROUTING AND REVIEW OF QUALITY CONTROL REPORTS)	92
C104 EVALUATE TECHNICAL DATA	85
F311 EVALUATE DAMAGE TO MISSILE SURFACES	85
B43 COMPILE DATA FOR REPORTS	77
E230 MAKE ENTRIES ON AF TO FORMS 22 (TECHNICAL ORDER SYSTEM PUBLICATION IMPROVEMENT REPORT AND REPLY)	69
D149 EVALUATE OUT TRAINEES	62
D151 EVALUATE TRAINING METHODS, TECHNIQUES, OR PROGRAMS	62
P44 COMPILE DATA FOR STAFF STUDIES	54
B62 IMPLEMENT SAFETY PROGRAMS	54
C92 EVALUATE INDIVIDUALS FOR SPECIALIZED TRAINING	54
D123 ADMINISTER PERFORMANCE TESTS	46
E294 RESEARCH INFORMATION IN TECHNICAL PUBLICATIONS	46
E306 RELATE TO PROCEDURES	46

TABLE V

AF/HQ MANAGERS
GRP090

GROUP SIZE: 13
 PREDOMINATE PAYGRADES: E-7, E-8
 PERCENT OF SAMPLE: 2%

AVERAGE TIME IN JOB: 16 MONTHS
 AVERAGE TAFMS: 197 MONTHS
 AVERAGE TICF: 120 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
A5 DETERMINE DATA REQUIREMENTS	100
A6 DETERMINE EQUIPMENT REQUIREMENTS	100
A7 DETERMINE PERSONNEL REQUIREMENTS	100
A20 PLAN BRIEFINGS	100
B59 DRAFT CORRESPONDENCE	100
A4 CONDUCT MEETINGS	92
B43 COMPILE DATA FOR REPORTS	92
B44 COMPILE DATA FOR STAFF STUDIES	92
A27 PREPARE AGENDAS	85
B83 WRITE RECOMMENDATIONS FOR CHANGES IN PROCEDURES	69
C104 EVALUATE TECHNICAL DATA	62
E170 ANALYZE MAINTENANCE TRENDS	2
E266 MONITOR STATUS OF EQUIPMENT	62
E267 MONITOR STATUS OF MISSILES	62
B45 COORDINATE MUNITIONS MAINTENANCE FUNCTIONS	54
C90 EVALUATE EQUIPMENT DEVELOPMENT DATA	54
C91 EVALUATE EQUIPMENT MODIFICATION DATA	54
C95 EVALUATE INSPECTION REPORTS	54
E294 RESEARCH INFORMATION IN TECHNICAL PUBLICATIONS	54
A17 ESTABLISH ORGANIZATIONAL POLICIES	46
C103 EVALUATE SUGGESTIONS	46
E306 VERIFY TO PROCEDURES	46
B56 DIRECT RELOCATION OF EQUIPMENT	38
C94 EVALUATE INSPECTION PROCEDURES	38
D151 EVALUATE TRAINING METHODS, TECHNIQUES, OR PROGRAMS	31

TABLE VI

SECTION NCOIC PERSONNEL
GRP064

GROUP SIZE: 55
 PREDOMINATE PAYGRADES: E-7
 PERCENT OF SAMPLE: 8%

AVERAGE TIME IN JOB: 26 MONTHS
 AVERAGE TAFMS: 172 MONTHS
 AVERAGE TICF: 111 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
C119 WRITE APR	98
B48 COUNSEL PERSONNEL ON MILITARY-RELATED MATTERS	96
A10 DETERMINE WORK PRIORITIES	95
C88 EVALUATE DUTY PERFORMANCE OF PERSONNEL	95
B49 COUNSEL PERSONNEL ON PERSONAL PROBLEMS	93
C96 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE	91
D156 MAKE ENTRIES ON AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	91
A3 CONDUCT BRIEFINGS	87
B42 ASSIGN WORK PRIORITIES	87
C116 PERFORM SUPERVISORY INSPECTIONS	85
A9 DETERMINE SUPPLY REQUIREMENTS	84
A26 PLAN WORK ASSIGNMENTS	84
B66 INTERPRET DIRECTIVES FOR SUBORDINATES	82
A38 SCHEDULE WORK ASSIGNMENTS	80
A22 PLAN MAINTENANCE	78
E59 DRAFT CORRESPONDENCE	69
C97 EVALUATE PERSONS UNDER PERSONNEL RELIABILITY PROGRAM (PRP)	65
E270 MONITOR STATUS OF WORK ORDERS	56
B78 SUPERVISE PERSONNEL OTHER THAN AFSC 411XOB AND AFSC 411XOC	55
B52 DIRECT EQUIPMENT MAINTENANCE	53
E304 UPDATE MMICS	45

TABLE VII

B1-B WEAPONS RELEASE TEAM CHIEFS
GRPO 112

GROUP SIZE: 6
 PREDOMINATE PAYGRADES: E-5
 PERCENT OF SAMPLE: 1%

AVERAGE TIME IN JOB: 58 MONTHS
 AVERAGE TAFMS: 87 MONTHS
 AVERAGE TICF: 85 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
B48 COUNSEL PERSONNEL ON MILITARY-RELATED MATTERS	100
B78 SUPERVISE PERSONNEL OTHER THAN AFSC 411XOB AND AFSC 411XOC	100
C88 EVALUATE DUTY PERFORMANCE OF PERSONNEL	100
D157 MAKE ENTRIES ON AF FORMS 623A (ON-THE-JOB TRAINING RECORD- CONTINUATION SHEET)	100
P945 PERFORM OPERATOR MAINTENANCE ON MAINTENANCE VEHICLES	100
D133 CONDUCT OJT	83
D149 EVALUATE OJT TRAINEES	83
I449 PERFORM PHYSICAL INSPECTION OF AIRCRAFT	83
P923 IDENTIFY SAFETY HAZARDS	83
P927 INSPECT MAINTENANCE VEHICLES	83
P66 INTERPRET DIRECTIVES FOR SUBORDINATES	67
P83 WRITE RECOMMENDATIONS FOR CHANGES IN PROCEDURES	67
C96 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS	67
C97 EVALUATE PERSONS UNDER PERSONNEL RELIABILITY PROGRAM (PRP)	67
P926 INSPECT EQUIPMENT ON RECEIPT	67
P929 INSTALL SAFETY DEVICES (PINS, CHOCKS, FLAGS)	67
D137 COUNSEL OJT TRAINEES ON TRAINING PROGRESS	50
E306 VERIFY TC PROCEDURES	50
P928 INSPECT POWER UNITS	50
E201 MAINTAIN MICROFICHE INDEX	33
E204 MAINTAIN TECHNICAL ORDER (TO) FILES	33
F308 APPLY PAINTS	33
I452 PERFORM PREOPERATIONAL CHECKS OF MISSILE SYSTEMS	33
P953 TRANSPORT EQUIPMENT USING FORKLIFTS	33

TABLE VIII
MUNITIONS CONTROL PERSONNEL
GRP202

GROUP SIZE: 33	AVERAGE TIME IN JOB: 26 MONTHS
PREDOMINATE PAYGRADES: E-5	AVERAGE TAFMS: 105 MONTHS
PERCENT OF SAMPLE: 5%	AVERAGE TICF: 90 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
E265 MONITOR LOCATION OF MUNITIONS	100
E267 MONITOR STATUS OF MISSILES	100
E268 MONITOR STATUS OF MUNITIONS	100
B79 TRACK MOVEMENT OF EQUIPMENT	97
E269 MONITOR STATUS OF VEHICLES	97
E272 NOTIFY AGENCIES OF WEAPONS STATUS CHANGES	97
E273 NOTIFY FIRE DEPARTMENT OF MUNITIONS MOVEMENTS AFFECTING FIREFIGHTING PROCEDURES	97
E275 OBTAIN PERSONNEL AVAILABILITY STATUS	94
E173 CONTROL ACCESS TO MUNITIONS	88
B46 COORDINATE REPAIR ACTIVITIES ON AIRCRAFT WITH OTHER AGENCIES, AFSCS, AND SQUADRONS	85
A10 DETERMINE WORK PRIORITIES	82
E187 GRANT AUTHORIZATION FOR MOVEMENT OF WEAPONS	82
B39 ADVISE CONTROL AND EMERGENCY ORGANIZATIONS OF CONVOY ROUTES, START TIME, AND DESTINATION	79
B56 DIRECT RELOCATION OF EQUIPMENT	73
B52 DIRECT EQUIPMENT MAINTENANCE	64
A31 REVIEW UNIT DISASTER PLANS	58
E209 MAKE ENTRIES ON AF FORMS 1924 (EVENTS LOG)	55
E224 MAKE ENTRIES ON AF FORMS 504 (WEAPONS CUSTODY TRANSFER DOCUMENT (AIRCRAFT))	55
B61 IMPLEMENT EMERGENCY WAR ORDER (EWO) PLANS	52
E176 COORDINATE AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD) WITH MAINTENANCE CONTROL	49
E185 FILE AF FORMS 1764 (MAJOR ASSEMBLY/COMPONENT STATUS CHANGE REPORT)	42
E260 MAKE ENTRIES ON DD FORMS 173 (JOINT MESSAGEFORM)	36

TABLE IX
MISSILE MAINTENANCE ANALYSIS PERSONNEL
GRP040

GROUP SIZE: 40
PREDOMINATE PAYGRADES: E-5
PERCENT OF SAMPLE: 5%

AVERAGE TIME IN JOB: 19 MONTHS
AVERAGE TAFMS: 102 MONTHS
AVERAGE TICF: 82 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
E244 MAKE ENTRIES ON AFTO FORMS 95 (SIGNIFICANT HISTORICAL DATA)	91
E170 ANALYZE MAINTENANCE TRENDS	86
B43 COMPILE DATA FOR REPORTS	83
B51 DIRECT ANALYSIS FUNCTIONS	71
B64 INITIATE RETEST OK (RTOK) REPORTS	69
E226 MAKE ENTRIES ON AF FORMS 988 (LEAVE REQUEST/AUTHORIZATION)	63
E303 TYPE REPORTS	60
E267 MONITOR STATUS OF MISSILES	57
E182 DRAFT MESSAGES	54
A10 DETERMINE WORK PRIORITIES	49
E197 MAINTAIN ADMINISTRATIVE FILES	49
C115 PERFORM SELF-INSPECTIONS	46
B44 COMPILE DATA FOR STAFF STUDIES	43
B59 DRAFT CORRESPONDENCE	43
E204 MAINTAIN TECHNICAL ORDER (TO) FILES	40
E287 PREPARE MAINTENANCE REPORTS	37
E176 COORDINATE AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD) WITH MAINTENANCE CONTROL	34
E220 MAKE ENTRIES ON AF FORMS 302 (ROOM OR AREA SECURITY INSPECTION RECORD)	31
B80 UPDATE STATUS BOARDS	29
B69 MAINTAIN MUNITIONS SERIAL NUMBER LISTS	26

TABLE X
MAINTENANCE SUPPLY LIAISON TECHNICIANS
GRP060

GROUP SIZE: 6	AVERAGE TIME IN JOB: 16 MONTHS
PREDOMINATE PAYGRADES: E-4	AVERAGE TAFMS: 71 MONTHS
PERCENT OF SAMPLE: 1%	AVERAGE TICF: 67 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
E179 COORDINATE SUPPLY REQUESTS WITH BASE SUPPLY	100
E190 INVENTORY BENCH STOCK ITEMS	83
E201 MAINTAIN MICROFICHE INDEX	83
E206 MAKE ENTRIES ON AF FORMS 1297 (TEMPORARY ISSUE RECEIPT)	83
E214 MAKE ENTRIES ON AF FORMS 2413 (SUPPLY CONTROL LOG)	83
E177 COORDINATE BENCH STOCK REQUIREMENTS WITH BASE SUPPLY	67
E191 INVENTORY EQUIPMENT	67
E192 INVENTORY MATERIAL	67
E210 MAKE ENTRIES ON AF FORMS 2005 (ISSUE/TURN IN REQUEST)	67
E293 RESEARCH INFORMATION IN SUPPLY PUBLICATIONS	67
E194 ISSUE TOOLS	50
E196 MAINTAIN ACCOUNTABILITY RECORDS OF TOOLS	50
E198 MAINTAIN BENCH STOCK LEVELS	50
E203 MAINTAIN PUBLICATION LIBRARIES	50
E204 MAINTAIN TECHNICAL ORDER (TO) FILES	50
E294 RESEARCH INFORMATION IN TECHNICAL PUBLICATIONS	50
F323 PERFORM CORROSION INSPECTIONS	50
E175 CONTROL CLASSIFIED ITEMS, SUCH AS TAPES, MISSION SCORING DATA, OR COMPUTER DISCS	33
E193 ISSUE EQUIPMENT	33
E195 MAINTAIN ACCOUNTABILITY RECORDS OF EQUIPMENT	33
P950 STENCIL IDENTIFIERS ON EQUIPMENT	33

TABLE XI

FB-111A AIRCRAFT INTEGRATED SYSTEMS CHECKOUT PERSONNEL
GRP205

GROUP SIZE: 22	AVERAGE TIME IN JOB: 20 MONTHS
PREDOMINATE PAYGRADES: E-3	AVERAGE TAFMS: 41 MONTHS
PERCENT OF SAMPLE: 3%	AVERAGE TICF: 29 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
K567 INSTALL SRAM AIRBORNE MISSILE INTEGRATED TEST (SAMIT) ON PYLON STATIONS	100
K568 INSTALL SAMIT ON WEAPONS BAY STATIONS	100
K571 PERFORM AUXILIARY WEAPONS BAY DOOR CHECKS	100
K578 PERFORM FIRT SCORING DATA RETRIEVAL WITH PRINTERS	100
K585 PERFORM NUCLEAR WEAPONS STATION INTERMIX TESTS	100
K588 PERFORM PIVOT PYLON JETTISON CHECKS	100
K591 PERFORM SAMIT INTERFACE CHECKS	100
I442 INTERPRET FAULT ISOLATION RECORD TABLE (FIRT)	95
K582 PERFORM MISSILE INTEGRATED SYSTEMS TEST PROCEDURES	95
K589 PERFORM PIVOT PYLON STRAY VOLTAGE CHECKS	95
K602 PERFORM W-13 CHECKS ON AIRCRAFT WEAPONS SYSTEM	95
K603 PERFORM W-16/W-18 CHECKS ON AIRCRAFT WEAPONS SYSTEM	95
K599 PERFORM STORES CONTROL PANEL TESTS	91
K586 PERFORM OPERATIONAL CHECKS ON NUCLEAR WEAPONS SIMULATOR	86
K614 REPLACE AIRCRAFT CONTROL PANELS	86
I452 PERFORM PREOPERATIONAL CHECKS OF MISSILE SYSTEMS	82
K598 PERFORM SRAM STATION DATA ENTRY PROCEDURES	82
I449 PERFORM PHYSICAL INSPECTION OF AIRCRAFT	77
P949 REPAIR ELECTRICAL CONNECTORS	68
E243 MAKE ENTRIES ON AFTO FORMS 781 (AEROSPACE VEHICLE FLIGHT DATA DOCUMENT)	64
I441 DEBRIEF AIRCREWS	55
K615 REPLACE AIRCRAFT PANEL FACEPLATES	55

TABLE XII
RESIDENT COURSE INSTRUCTORS
GRP098

GROUP SIZE: 20	AVERAGE TIME IN JOB: 22 MONTHS
PREDOMINATE PAYGRADES: E-4/5/6	AVERAGE TAFMS: 106 MONTHS
PERCENT OF SAMPLE: 3%	AVERAGE TICF: 96 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
D124 ADMINISTER WRITTEN TESTS	85
D165 SCORE WRITTEN TESTS	80
B48 COUNSEL PERSONNEL ON MILITARY-RELATED MATTERS	75
D144 DEVELOP TESTS	75
E226 MAKE ENTRIES ON AF FORMS 988 (LEAVE REQUEST/AUTHORIZATION)	75
D134 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	70
D126 ARRANGE FOR TRAINING AIDS, SPACE, OR EQUIPMENT	65
D150 EVALUATE PROGRESS OF RESIDENT COURSE STUDENTS	65
D141 DEVELOP PLANS OF INSTRUCTION (POI)	60
D167 SECURE TRAINING EQUIPMENT	55
E204 MAINTAIN TECHNICAL ORDER (TO) FILES	55
D138 COUNSEL RESIDENT COURSE STUDENTS ON TRAINING PROGRESS	50
D164 SCORE PERFORMANCE TESTS	50
P923 IDENTIFY SAFETY HAZARDS	45
D142 DEVELOP RESIDENT COURSE CURRICULA MATERIALS	40
D160 PLAN RESIDENT COURSES	40
P947 READ AND INTERPRET WIRING DIAGRAMS	40
D151 EVALUATE TRAINING METHODS, TECHNIQUES, OR PROGRAMS	35
F333 PERFORM STRAY VOLTAGE TESTS	35
D122 ADMINISTER ORAL TESTS	30
E266 MONITOR STATUS OF EQUIPMENT	30

TABLE XIII

GLCM PERSONNEL-DISPERSAL TRAINING INSTRUCTORS
GRP377

GROUP SIZE: 5	AVERAGE TIME IN JOB: 12 MONTHS
PREDOMINATE PAYGRADES: E-5, E-6	AVERAGE TAFMS: 113 MONTHS
PERCENT OF 411XOC CLUSTER: 9%	AVERAGE TICF: 77 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
B83 WRITE RECOMMENDATIONS FOR CHANGES IN PROCEDURES	100
D124 ADMINISTER WRITTEN TESTS	100
D126 ARRANGE FOR TRAINING AIDS, SPACE, OR EQUIPMENT	100
E191 INVENTORY EQUIPMENT	100
Y1347 INSPECT M-105 TRAILERS	100
Y1356 INSPECT M-925/923 5-TON CARGO TRUCKS	100
Y1381 OPERATE MAN VEHICLES M1013, M1014	100
Z1410 CAMOUFLAGE VEHICLES	100
Z1425 CONSTRUCT HASTY FIGHTING POSITIONS	100
Z1442 DISCONNECT TA-838 FIELD PHONES	100
Z1497 PACK INDIVIDUAL EQUIPMENT	100
Z1504 PERFORM HAND AND ARM SIGNALS	100
Z1516 PERFORM WEAPON CHECKS, M-16	100
Z1527 POSITION VEHICLES BY COMPASS	100
C96 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS	80
D135 CONDUCT TRAINING BRIEFINGS	80
D138 COUNSEL RESIDENT COURSE STUDENTS ON TRAINING PROGRESS	80
D164 SCORE PERFORMANCE TESTS	80
E297 REVIEW GENERATION MARSHALLING PLAN CHECKLIST	60
Z1483 MONITOR WATER SUPPLY STATUS	60
Z1423 CONSTRUCT CLAM SHELL SHELTERS	40
Z1567 SERVICE M-46 CHEMICAL DETECTORS	40

TABLE XIV

GLCM PERSONNEL- LCC/TEL/WCS MAINTENANCE TECHNICIANS
GRP242

GROUP SIZE: 24
 PREDOMINATE PAYGRADES: E-4/E-6
 PERCENT OF 411XOC CLUSTER: 44%

AVERAGE TIME IN JOB: 19 MONTHS
 AVERAGE TAFMS: 81 MONTHS
 AVERAGE TICF: 47 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
S1134 INSPECT TEL SIGNAL TRANSFER UNITS (A9)	100
T1144 INSPECT TEL EQUIPMENT FOR DAMAGE	100
T1156 PERFORM TEL PREMAINTENANCE	100
U1203 PERFORM ELECTRICAL POWER SYSTEM (EPS) POWER APPLICATION	100
U1206 PERFORM WEAPON CONTROL SYSTEMS (WCS) CHECKOUTS	100
U1207 PERFORM WCS POWER APPLICATION	100
V1263 PERFORM RANDOM ACCESS STORAGE SYSTEM (RASS) BIT	100
V1265 PERFORM STANDBY CONTROL PANEL (SCP) BIT	100
W1272 INSPECT FIBER OPTIC PARTS	100
R1109 INSPECT SHELTER INTERIOR FOR CORROSION	96
W1284 PERFORM GUARD DUTY WHILE SHELTERS ARE OPEN	96
Z1435 DIG FOX HOLES	96
Z1486 OPEN RSS DOORS	96
S1122 INSPECT GROUNDING HARDWARE	92
Y1381 OPERATE MAN VEHICLES M1013, M1014	92
Z1471 LOAD EQUIPMENT BOXES ON VEHICLES	92
R1098 INSPECT INPUT/OUTPUT (I/O) INTERFACE UNITS (2166D-1, D-5)	91
W1290 PERFORM ORA EXIT PROCEDURES	88
Z1587 WATERPROOF INDIVIDUAL EQUIPMENT	88
Y1364 MATE MAN VEHICLE TO TRAILERS	83
E233 MAKE ENTRIES ON AFTO FORMS 245 (INDUSTRIAL/SUPPORT EQUIP- MENT RECORD (CONTINUATION SHEET))	79

AD-A194 419

MISSILE SYSTEMS MAINTENANCE AFSC 411X08/C(U) AIR FORCE
OCCUPATIONAL MEASUREMENT CENTER RANDOLPH AFB TX APR 88

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UNCLASSIFIED

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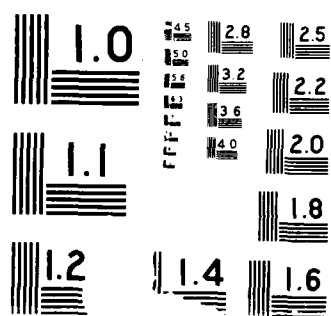


TABLE XV

GLCM PERSONNEL- TRAINING SYSTEMS MAINTENANCE SUPPORT PERSONNEL
GRP166

GROUP SIZE: 16
 PREDOMINATE PAYGRADES: E-4/E-6
 PERCENT OF 411XOC CLUSTER: 30%

AVERAGE TIME IN JOB: 29 MONTHS
 AVERAGE TAFMS: 134 MONTHS
 AVERAGE TICF: 44 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
T1175 REPLACE SIGNAL DATA TRANSLATOR UNITS 1 THRU 4	100
T1181 REPLACE 1602 PROCESSORS	100
T1186 VERIFY ALL SWITCH POSITIONS ON TEL CONTROL PANELS	100
U1203 PERFORM ELECTRICAL POWER SYSTEM (EPS) POWER APPLICATION	100
U1206 PERFORM WEAPON CONTROL SYSTEMS (WCS) CHECKOUTS	100
U1217 REPAIR CENTRAL DATA PROCESSING SETS (CDPS)	100
U1218 REPAIR CRITICAL FUNCTION ENTRY PANELS (CFEP)	100
U1248 TROUBLESHOOT CFU	100
U1250 TROUBLESHOOT KEYBOARDS	100
U1256 TROUBLESHOOT STU USING DIAGNOSTIC SOFTWARE	100
V1259 PERFORM CRITICAL FUNCTION UNIT (CFU) BIT	100
V1262 PERFORM OPERATOR DISPLAY AND ENTRY PANEL (ODEP) BIT	100
V1265 PERFORM STANDBY CONTROL PANEL (SCP) BIT	100
V1266 PERFORM 1666 DATA PROCESSING SET (DPS) BIT	100
T1173 REPLACE NUCLEAR SURETY LINKS	94
U1223 REPLACE CENTRAL DATA PROCESSING SETS 1666	94
U1239 REPLACE PRINTED CIRCUIT BOARDS OF SIGNAL TRANSFER UNITS (STU)	94
U1253 TROUBLESHOOT PDP	94
W1310 VERIFY SWITCH AND CIRCUIT BREAKER SETTINGS ON MEP-404B GENERATOR SETS	81
T1143 INHIBIT TEL AUDIO ALARMS	75
R1102 INSPECT LCC SIGNAL TRANSFER UNITS	69
S1130 INSPECT SIGNAL DATA TRANSLATORS EX3 MOD 0 (A2-A5)	69

APPENDIX B

SELECTED REPRESENTATIVE TASKS PERFORMED BY
FIRST-ENLISTMENT 411X0B MAJOR JOB GROUPS

TABLE I

TASKS PERFORMED BY AFSC 411XOB FIRST ENLISTMENT
B-52 WEAPONS RELEASE PERSONNEL
(1-48 MONTHS TAFMS)

TASKS	PERCENT MEMBERS PERFORMING (N=27)
J468 INSPECT MAU-175/A	96
J469 INSPECT MAU-6/A	96
J512 REPAIR MAU-6/A	96
J511 REPAIR MAU-175/A	96
J498 PERFORM SELF-TEST ON WEAPON PRELOAD TESTERS (WPT)	96
J490 PERFORM MAU-6/A CLIP-IN RACK RIGGINGS	93
J503 REPAIR AGM-69A PIN ACTUATORS	93
J516 REPLACE AGM-69A PIN ACTUATORS	93
J489 PERFORM MAU-175/A CLIP-IN RACK RIGGINGS	89
J477 PERFORM AIU BOMB BAY DOOR CHECKOUTS	89
J455 INSPECT AGM-69A PIN ACTUATORS	85
J500 PERFORM SYSTEM INTERFACE TEST (SIT) PROCEDURES	85
E238 MAKE ENTRIES ON AFTC FORMS 350 (REPAIR ITEM PROCESSING TAG)	85
J537 REPLACE MAU-6/A	85
I443 PERFORM AIRCRAFT PHASE 1 INSPECTIONS	81
J536 REPLACE MAU-175/A	81
F308 APPLY PAINTS	78
J476 PERFORM AIRCRAFT POWER APPLICATIONS	78
I446 PERFORM CRITICAL CIRCUIT MAINTENANCE CHECKS (CCMC)	78
C111 PERFORM EQUIPMENT INSPECTIONS	63
J502 REMOVE DATA TRANSFER UNIT CARTRIDGES	67

TABLE II
TASKS PERFORMED BY AFSC 411X0B FIRST ENLISTMENT
MISSILE SYSTEMS CHECKOUT PERSONNEL
(1-48 MONTHS TAFMS)

TASKS	PERCENT MEMBERS PERFORMING (N=151)
F310 CLEAN MISSILE SURFACES	97
F327 PERFORM LEVEL 1 MISSILE CHECKOUTS	96
F308 APPLY PAINTS	95
F328 PERFORM LEVEL 2 MISSILE CHECKOUTS	92
F326 PERFORM HAZARDOUS CURRENT TESTS	91
F323 PERFORM CORROSION INSPECTIONS	89
F311 EVALUATE DAMAGE TO MISSILE SURFACES	89
F316 MIX ADHESIVES	89
F319 OPERATE COOLING CONTROL UNITS (CCU)	88
F312 ISOLATE FAULTS TO MISSILE SYSTEMS	87
F318 MIX SEALANTS	87
F315 MEASURE ENVIRONMENTAL CONTROL SYSTEMS (ECS) LEAKAGE RATES	87
F333 PERFORM STRAY VOLTAGE TESTS	86
F309 APPLY SEALERS	85
F329 PERFORM LEVEL 3 CHECKOUT OF CONTROL AND GUIDANCE ELEC- TRONICS (C&GE)	85
H410 PERFORM ROLL TRANSFER TO AND FROM MISSILE TEST STANDS	84
H409 PERFORM ROLL TRANSFER TO AND FROM MISSILE HARD STANDS	83
F313 ISOLATE MALFUNCTIONS TO MISSILE COMPONENTS	83
H407 PERFORM FIN LOCKING OR UNLOCKING PROCEDURES	82
F314 ISOLATE MALFUNCTIONS TO MISSILES	81
H411 PERFORM ROLL TRANSFER TO AND FROM MISSILE TRAILERS	79
H406 PERFORM CUTTING OPERATIONS OF SILICONE INSULATION	78

TABLE III

TASKS PERFORMED BY AFSC 411X0B FIRST ENLISTMENT VERIFICATION
AND CHECKOUT OF EQUIPMENT PERSONNEL
(1-48 MONTHS TAFMS)

TASKS	PERCENT MEMBERS PERFORMING (N=23)
P919 CLEAN ELECTRONIC TEST EQUIPMENT	100
0835 REPAIR ELECTRICAL CABLE CONNECTORS	100
0838 REPAIR ESTS (AN/GSM-263 AND AN/GSM-263A)	96
M771 PERFORM FAULT ISOLATION ON MISSILE RADAR ALTIMETER TEST	96
N803 CALIBRATE MISSILE RADAR ALTIMETER TEST ASSEMBLIES (MRATA)	96
0840 REPAIR MRATA	96
N800 CALIBRATE ESTS (AN/GSM-263 AND AN/GSM-263A)	96
0836 REPAIR ELECTRICAL CABLES	96
L638 CHECK ALIGNMENT OF ESTS PATCHBOARD RECEIVER CONTACTS	91
L652 PERFORM ESTS CONFIDENCE TESTS	91
L661 PERFORM OPERATIONAL ASSURANCE TESTS (OAT) ON ESTS	91
L648 MAINTAIN ESTS AIR FILTERS	91
0831 PERFORM CORROSION CONTROL OF ELECTRONIC COMPONENTS OR EQUIPMENT	91
L720 PERFORM SELF-TESTS ON MRATA	91
C111 PERFORM EQUIPMENT INSPECTIONS	87
M768 PERFORM FAULT ISOLATION ON ESTS (AN/GSM-263 AND AN/GSM-263A)	87
L681 PERFORM PERIODIC INSPECTIONS OF MISSILE RADAR ALTIMETER	87
0841 REPAIR SAFE STATE TESTERS	87
0904 REPLACE PRINTED CIRCUIT CARD ASSEMBLIES	83

TABLE IV

TASKS PERFORMED BY AFSC 411X0B FIRST-ENLISTMENT FB-111A
AIRCRAFT INTEGRATED SYSTEMS CHECKOUT PERSONNEL
(1-48 MONTHS TAFMS)

TASKS	PERCENT MEMBERS PERFORMING (N=17)
K567 INSTALL SRAM AIRBORNE MISSILE INTEGRATED TEST (SAMIT) ON PYLON STATIONS	100
K568 INSTALL SAMIT ON WEAPONS BAY STATIONS	100
K569 ISOLATE WEAPONS SYSTEM MALFUNCTIONS	100
K570 PERFORM ARMING AND RELEASE CIRCUITS TESTS	100
K572 PERFORM CAE CHECKOUT TEST PROCEDURES	100
K578 PERFORM FIRT SCORING DATA RETRIEVAL WITH PRINTERS	100
K580 PERFORM FIXED PYLON STRAY VOLTAGE CHECKS	100
K585 PERFORM NUCLEAR WEAPONS STATION INTERMIX TESTS	100
K588 PERFORM PIVOT PYLON JETTISON CHECKS	100
K589 PERFORM PIVOT PYLON STRAY VOLTAGE CHECKS	100
K607 PERFORM W-9 CHECKS ON AIRCRAFT WEAPONS SYSTEM	100
K610 REMOVE SAMIT FROM PYLON STATIONS	100
K611 REMOVE SAMIT FROM WEAPONS BAY STATIONS	100
K618 REPLACE CENTRAL PROGRAM UNITS (CPU)	100
K627 REPLACE RELEASE PROGRAM UNITS (RPU)	100
I448 PERFORM MISSILE SIMULATOR CHECKS	100
K577 PERFORM FAULT ISOLATION OF FB-111 STORES MANAGEMENT SYSTEMS	94
K583 PERFORM MISSION DATA INSERTION PROCEDURES	94
K601 PERFORM W-10 CHECKS ON AIRCRAFT WEAPONS SYSTEM	94
K602 PERFORM W-13 CHECKS ON AIRCRAFT WEAPONS SYSTEM	94
K603 PERFORM W-16/W-18 CHECKS ON AIRCRAFT WEAPONS SYSTEM	94
K604 PERFORM W-20 CHECKS ON AIRCRAFT WEAPONS SYSTEM	94

END

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