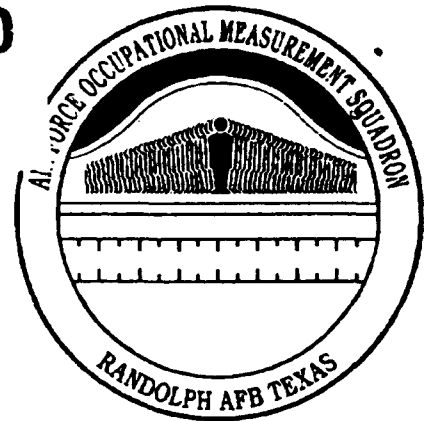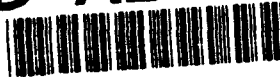AD-A283 850

UNITED STATES
AIR FORCE

OCCUPATIONAL

SURVEY REPORT

AIRBORNE RADAR SYSTEMS
AFSC 1A5X3
(FORMERLY AFSC 118X2)
AFPT 90-118-985

AIRBORNE WARNING AND CONTROL RADAR
AFSC 2A1X4
(FORMERLY AFSC 455X4)
AFPT 90-455-986

JUNE 1994

OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION and TRAINING COMMAND
1550 5th STREET EAST
RANDOLPH AFB, TEXAS 78150-4449

94-27154

94 8 24 179

DISTRIBUTION FOR AFSCs 1A5X3 AND 2A1X4 OSR

	OSR	JOB INV	1A5X3 ANL EXT	2A1X4 ANL EXT	1A5X3 TNG EXT	2A1X4 TNG EXT
AFELM/NAEWFC, CMR #450, Box 7500, APO AE 09705	3				3	3
AFOMS/OMDQ	1					
AFOMS/OMYXL	10	10			5	5
AL/HRMM	2					
AL/HRTE	2				1	1
ARMY OCCUPATIONAL SURVEY BRANCH	1					
CCAF/AYX	1					
DEFENSE TECHNICAL INFORMATION CENTER	2					
HQ ACC/DPTTF	3				3	3
HQ AETC/DPAEE	3					3
HQ AFC4A/RMPP	3				3	3
HQ AFMC/DPUE	3				3	3
HQ AFMPC/DPMRAD3	2					
HQ AFMPC/DPMYCO3	2					
HQ AFSOC/DPAPT	3				3	3
HQ AFSPACECOM/DPAE	3				3	3
HQ AIA/DPAT	3				3	3
HQ AMC/DPAET	1					
HQ PACAF/DPAET	3				3	3
HQ USAF/XOOT	1				1	
HQ USAF/LGMM	1					1
HQ USAFE/DPATTJ	3				3	3
NODAC	1					
STANDARDS BRANCH	1					
USAFAMS/DTMP	1	1				1
336 TS/TTOT, 809 Phantom St, Keesler AFB MS 39534-2061	2	2	1	1	4	4
81 TRG/CCVT, 825 Hercules, Suite 101, Keesler AFB MS 39534-2037	1				1	1

TABLE OF CONTENTS

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS
(Tables, Figures, Appendices)

TABLE OF CONTENTS (CONTINUED)
(Tables, Figures, Appendices)

v

PREFACE

This report presents the results of an Air Force Occupational Survey of the Airborne Radar Systems (AFSC 1A5X3, formerly AFSC 118X2) and the Airborne Warning and Control Radar (AFSC 2A1X4, formerly AFSC 455X4) career ladders. Authority to conduct occupational surveys is contained in AFI 36-2623. Computer products used in this report are available for use by operations and training officials.

Chief Master Sergeant Jeffrey L. Milligan, Inventory Development Specialist, developed the survey instrument. Captain David W. Keller, Occupational Analyst, analyzed the data and wrote the final report. Mr. Wayne Fruge provided computer programming support, and Mr. Richard G. Ramos provided administrative support. Major Randall C. Agee, Chief, Airman Analysis Section, Occupational Analysis Flight, Air Force Occupational Measurement Squadron, reviewed and approved this report for release.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to the Air Force Occupational Measurement Squadron, Attention: Chief, Occupational Analysis Flight (OMY), 1550 5th Street East, Randolph AFB, Texas, 78150-4449 (DSN 487-6623).

RICHARD C. OURAND, JR., Lt Col, USAF
Commander
Air Force Occupational Measurement Sq

JOSEPH S. TARTELL
Chief, Occupational Analysis Flight
Air Force Occupational Measurement Sq

THIS PAGE INTENTIONALLY LEFT BLANK

SUMMARY OF RESULTS

1. *Survey Coverage:* The Airborne Radar Systems (AFSC 1A5X3, formerly AFSC 118X2) and Airborne Warning and Control Radar (AFSC 2A1X4, formerly AFSC 455X4) career ladders were surveyed to obtain current task and equipment data for use in examining training programs. Survey results are based on responses from 86 AFSC 1A5X3 personnel (53 percent of the assigned population) and 146 AFSC 2A1X4 personnel (77 percent of the assigned population).

2. *Career Ladder Structure:* Structure analysis identified two clusters and four jobs: In-flight Maintenance job, On/Off Equipment Maintenance cluster, Back Shop Maintenance job, Technical Training School job, Field Training Detachment job, and Management cluster. This analysis reveals a clear distinction between the two specialties, with overlap occurring only in management jobs.

3. *Career Ladder Progression:*

   a. *AFSC 1A5X3 Career Ladder:* Personnel in the AFSC 1A5X3 career ladder follow an atypical career progression pattern. Since most AFSC 1A5X3 personnel occupy a one-deep position on the E-3 Sentry (AWACS) aircraft, members at all skill levels perform roughly the same type of functions. Three-, 5-, and 7-skill level personnel all concentrate on common aircrew tasks rather than actual equipment removal or replacement actions. For the most part, experienced members remain in technical jobs, rather than moving into traditional supervisory positions. While 7-skill level members do perform more supervisory and administrative tasks than lower skill levels, the majority of their time continues to be spent in technical, aircrew-related duties. AFMAN 36-2108 Specialty Descriptions are accurate.

   b. *AFSC 2A1X4 Career Ladder:* Personnel in the AFSC 2A1X4 career ladder follow a more traditional career progression pattern. Three- and 5-skill level personnel perform technical functions oriented toward fault isolation, bench checking, and equipment removal, repair, and replacement actions. Seven-skill level members perform more supervisory and administrative tasks. AFMAN 36-2108 Specialty Descriptions are accurate.

4. *Training Analysis:* Traditional matches of the survey data to various training documents - to include the Specialty Training Standards and Plans of Instruction - were not accomplished due to changing conditions in both career ladders and at the request of the respective AFSC training managers.

5. *Job Satisfaction Analysis:* For the most part, members of both career ladders appear relatively satisfied with their jobs. However, AFSC 1A5X3 first-enlistment airmen and members of the Back Shop Maintenance job indicated comparatively lower job satisfaction ratings. Career ladder managers should review these areas to determine possible causes and corrections.

6. *Implications:* AFMAN 36-2108 Specialty Descriptions for both AFSCs are accurate. Job satisfaction across the survey sample is stable, with the possible exceptions of AFSC 1A5X3 first-enlistment airmen and members in the Back Shop Maintenance job.

OCCUPATIONAL SURVEY REPORT (OSR)
AIRBORNE RADAR SYSTEMS CAREER LADDER
AFSC 1A5X3 (FORMERLY AFSC 118X2)
AND
AIRBORNE WARNING AND CONTROL RADAR CAREER LADDER
AFSC 2A1X4 (FORMERLY AFSC 455X4)

INTRODUCTION

This is a report of an occupational survey of the Airborne Radar Systems (AFSC 1A5X3) and Airborne Warning and Control Radar (AFSC 2A1X4) career ladders conducted by the Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS). This survey will ensure current data for use in updating career ladder documents and training programs.

In November 1984, an occupational survey was conducted on the former AFSC 328X2. At that time, AFSC 328X2 covered both airborne and ground radar equipment. In April 1988, AFSC 328X2 split into separate Airborne Radar Systems (AFSC 118X2) and Airborne Warning and Control Radar (AFSC 455X4) career ladders. In October 1993, AFSCs 118X2 and 455X4 converted to AFSCs 1A5X3 and 2A1X4, respectively. An occupational survey pertaining to AFSC 1A5X3 (then AFSC 118X2) career ladder was published in August 1989. However, this will be the first occupational survey conducted on the independent AFSC 2A1X4 career ladder.

Background

AFSC 1A5X3 Career Ladder: The Airborne Radar Systems career ladder 3- and 5-skill level members are responsible for visually inspecting, operating, and testing surveillance radar; Identification Friend or Foe interrogator; and ancillary systems aboard command and control systems aircraft while in flight. In addition, 3- and 5-skill level members monitor displays and indicators throughout in-flight systems operation. They also perform nonscheduled equipment maintenance, as well as preflight, in-flight, and postflight inspections of the above equipment.

In addition to the above, 7-skill level members are also responsible for supervising airborne radar activities and performing staff functions. They also establish training programs and classes.

At the 9-skill level, AFSC 1A5X3 is combined with two other aircrew operations AFSCs to form AFSC 1A590. For this reason, 9-skill levels and Chief Enlisted Manager (CEM) code personnel are outside the scope of this report and are not included in the survey.

Entrants into the AFSC 1A5X3 career ladder must complete three resident training courses at three different locations. First, they attend the Enlisted Aircrew Undergraduate course, J3AQR11010-000, at Sheppard Air Force Base, Texas. This is a 2-week, 4-day course that provides an introduction to future obligations and responsibilities for aircrew members.

The second course is the 32-week, 3-day Apprentice Airborne Radar Specialist course at Keesler Air Force Base, Mississippi (E3AQR1A533-000). This course covers electronic principles, digital principles, radar principles, digital computer principles, system fault isolation procedures, and equipment removal and replacement procedures used in the operation and maintenance of the airborne radar systems onboard the E-3 Sentry (Airborne Warning and Control System (AWACS)) aircraft.

Finally, the 8-week Airborne Radar Systems Operator Initial Qualification training course, E3000BQ0QX, at Tinker Air Force Base, Oklahoma, trains these airmen to operate, monitor, and maintain AWACS surveillance radar systems and consists of academic and flying training in the aircraft. Entrants are awarded the semi-skilled AFSC 1A533 designation after completion of this course.

Entry into this career ladder currently requires an Armed Forces Vocational Aptitude Test Battery (ASVAB) score of 67 in Electronics and a Strength Factor of "G" (weight lift of 40 lbs).

AFSC 2A1X4 Career Ladder: The Airborne Warning and Control Radar career ladder 3- and 5-skill level members are responsible for maintaining AWACS surveillance radar and interrogator systems while the aircraft is on the ground. In addition, 3- and 5-skill level members maintain support equipment and inspection records, and maintenance records.

In addition to the above, 7-skill level members are also responsible for advising on problems related to fault detection, isolation, removal, replacement, and modification of surveillance radar and interrogator systems. They also inspect completed maintenance actions.

At the 9-skill level, AFSC 2A1X4 is combined with six other conventional avionics AFSCs to form AFSC 2A190. For this reason, 9-skill levels and CEM code personnel are outside the scope of this report and are not included in the survey.

Entrants into AFSC 2A1X4 attend the 32-week, 3-day Apprentice Airborne Warning and Control Specialist course (E3ABR2A134-000) at Keesler Air Force Base, Mississippi. This course covers electronic principles, digital principles, radar principles, digital computer principles, system fault isolation procedures, and removal and replacement procedures used in the operation and maintenance of the airborne radar systems used on AWACS aircraft. Upon completion of this course, entrants are awarded the semi-skilled AFSC 2A134.

Entry into this career ladder currently requires an ASVAB score of 67 in Electronics and a Strength Factor of "G" (weight lift of 40 lbs).

Organization of this Report

The remainder of this OSR is organized into five major sections. The first will discuss survey methodology and information about the sample. Next, there is a section describing the analysis of the job structure of the combined sample. That section is followed by two sections which address a number of issues separately for the two specialties included in this survey. Each section describes progression through skill levels, with implications for the AFMAN 36-2108 Specialty Descriptions, data relevant to training developers, and job satisfaction analyses. Finally, the **IMPLICATIONS** will draw inferences and highlight issues addressed in previous sections of the report.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI), AFPT 90-118-985 and AFPT 90-455-986, dated September 1992. A tentative task list was prepared after reviewing pertinent career ladder publications and directives and tasks from previous applicable OSRs. The preliminary task list was refined and validated through personal interviews with 20 subject-matter experts at the following locations:

BASE	REASON FOR VISIT
Keesler AFB MS	Technical Training Schools
Tinker AFB OK	Air Control Wing Field Training Detachment

Others contacted included Air Force Military Personnel Center (AFMPC) classification personnel, functional and resource managers, the Air Force Career Field Manager, and the HQ AETC Action Officer for both AFSCs.

The resulting JI contained a comprehensive listing of 682 tasks grouped under 17 duty headings, with a background section requesting such information as grade, job title, time in present job, time in service, job satisfaction, equipment maintained, and forms used in the performance of the incumbent's job.

Survey Administration

From December 1992 through July 1993, Military Personnel Flights at operational bases worldwide administered the inventory to all eligible DAFSC 1A5X3 and 2A1X4 personnel. Members eligible for the survey consisted of the total assigned 3-, 5-, and 7-skill level population, excluding the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring within the time the inventories were administered to the field; and (4) personnel in their jobs less than 6 weeks. Participants were selected from a computer-generated mailing list obtained from personnel data tapes maintained by AFMPC, Randolph Air Force Base, Texas.

Each individual who completed the inventory first filled in an identification and biographical information section and then checked each task performed in his or her current job. After checking tasks performed, each individual rated the tasks checked on a 9-point scale showing relative time spent on that task, compared to other tasks performed. The ratings ranged from 1 (very small amount time spent) to 9 (very large amount time spent).

To determine relative time spent for each task, all of the incumbent's ratings are assumed to account for 100 percent of time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time spent on each task.

Survey Sample

Personnel were selected to participate in this study so as to ensure an accurate representation across MAJCOMs and paygrades. Table 1 reflects the percentage distribution, by MAJCOM, of assigned and sampled individuals in AFSCs 1A5X3 and 2A1X4 as of March 1992. Survey results are based on responses from 86 AFSC 1A5X3 personnel (53 percent of the assigned population) and 146 AFSC 2A1X4 personnel (77 percent of the assigned population). The data are displayed showing the assigned and sampled populations, based on the MAJCOM structures in place at the time the JIs were administered. Although survey data represent only 53 percent of assigned AFSC 1A5X3 personnel, MAJCOM and paygrade distributions indicate the sample is an accurate representation of this career ladder. Table 2 reflects the percentage distribution by paygrade groups. As shown by both tables, the survey sample accurately reflects the overall populations of each career ladder.

Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 1A5X3 and AFSC 2A1X4 personnel (generally E-6 or E-7 craftsmen) also completed a second booklet for either

4

TABLE 1

MAJCOM REPRESENTATION OF TOTAL SAMPLE

COMMAND	AFSC 1A5X3		AFSC 2A1X4	
	PERCENT OF ASSIGNED	PERCENT OF SAMPLE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
ACC	83	75	80	78
EUR	9	16	3	3
PACAF	7	9	7	7
AETC	0	0	9	12
AFIC	0	0	1	0
ELM	1	0	0	0

	AFSC 1A5X3	AFSC 2A1X4
TOTAL ASSIGNED	162	189
TOTAL SURVEYED	150	184
TOTAL IN SAMPLE	86	146
PERCENT OF ASSIGNED IN SAMPLE	53%	77%
PERCENT OF SURVEYED IN SAMPLE	57%	79%

TABLE 2

PAYGRADE DISTRIBUTION OF TOTAL SAMPLE

COMMAND	AFSC 1A5X3		AFSC 2A1X4	
	PERCENT OF ASSIGNED	PERCENT OF SAMPLE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
E-1 TO E-3	22	21	20	23
E-4	24	24	23	23
E-5	27	31	28	26
E-6	16	17	18	18
E-7	10	7	10	9
E-8	1	0	1	1

training emphasis (TE) or task difficulty (TD). The TE and TD booklets were processed separately from the JIs. This information is used in a number of different analyses discussed in more detail within this report.

Training Emphasis (TE). Training emphasis is defined as the degree of emphasis that should be placed on a task for first-enlistment personnel to receive structured training on that task. Structured training is defined as resident technical schools, field training detachments, mobile training teams, formal on-the-job training (OJT), or any other organized training method. Separate TE ratings were obtained for the two AFSCs in this study. Fifteen AFSC 1A5X3 and fourteen AFSC 2A1X4 experienced NCOs rated the tasks in the inventory on a 10-point scale ranging from 0 (not important to train) to 9 (extremely important to train). Overall agreement between the raters, in both instances, was acceptable.

The average AFSC 1A5X3 TE rating for this study is 1.81, with a standard deviation of 2.14. Tasks with an AFSC 1A5X3 TE rating of 3.91 or greater are considered important to train first-enlistment AFSC 2A1X4 personnel to perform.

The average AFSC 2A1X4 TE rating for this study is 2.08, with a standard deviation of 1.83. Tasks with an AFSC 2A1X4 TE rating of 3.91 or greater are considered important to train first-enlistment AFSC 2A1X4 personnel to perform.

Task Difficulty (TD). Task difficulty is defined as an estimate of how much time the average airman needs to learn how to perform each task satisfactorily. Seven AFSC 1A5X3 and nine AFSC 2A1X4 experienced supervisors rated the difficulty of the tasks in the inventory using a 9-point scale ranging from 1 (easy to learn) to 9 (very difficult to learn). Interrater agreement among these respondents was sufficiently high to combine TD ratings of both specialties. TD ratings are normally adjusted so tasks of average difficulty have a value of 5.00 and a standard deviation of 1.00. Any task with a difficulty of 6.00 or greater is considered to be difficult to learn.

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

CAREER LADDER STRUCTURE

The first step in the analysis process is to identify the structure of career ladders in terms of the jobs performed by the respondents. The Comprehensive Occupational Data Analysis Programs (CODAP) assists by creating an individual job description for each respondent based on the tasks performed and relative amount of time spent on these tasks. The CODAP automated job clustering program then compares all the individual job descriptions, locates the two

6

descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, CODAP either adds new members to this initial group or forms new groups based on the similarity of tasks and time spent ratings.

The basic group used in the hierarchical clustering process is the job. When two or more jobs have a substantial degree of similarity in tasks performed and time spent on tasks, they are grouped together and identified as a cluster. The structure of the career ladder is then defined in terms of jobs and clusters of jobs.

Overview of Specialty Jobs

Based on the analysis of tasks performed and the amount of time spent performing each task, two clusters and four jobs were identified within the surveyed career ladders. Figure 1 illustrates the jobs performed by AFSC 1A5X3 and AFSC 2A1X4 personnel.

Percent of Sample
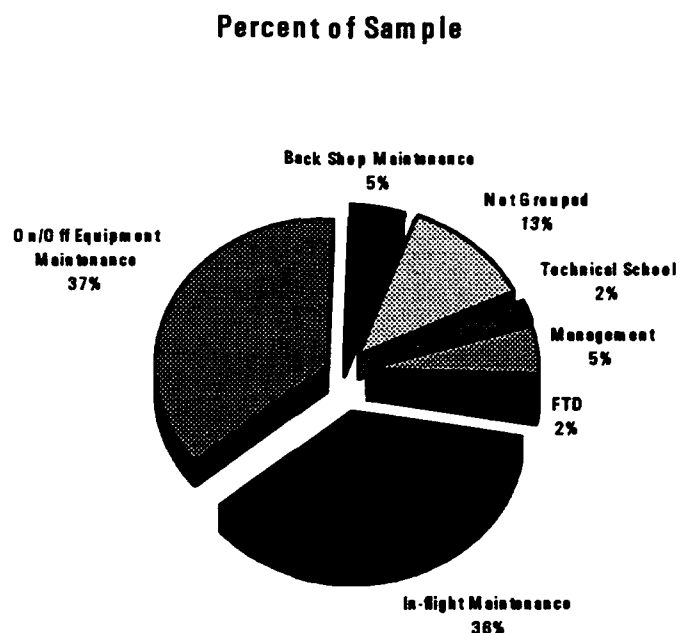
Figure 1

A listing of these jobs and job clusters is provided below. The stage (STG) number shown beside each title references computer-printed information; the letter "N" represents the number of personnel in each group.

I.   IN-FLIGHT MAINTENANCE JOB (STG31, N=84)

II. ON/OFF EQUIPMENT MAINTENANCE CLUSTER (STG27, N=85)

III. BACK SHOP MAINTENANCE JOB (STG38, N=12)

IV. TECHNICAL TRAINING SCHOOL JOB (STG32, N=5)

V. FIELD TRAINING DETACHMENT JOB (STG20, N=5)

VI. MANAGEMENT CLUSTER (STG24, N=12)

The respondents forming these groups account for 87 percent of the survey sample. The remaining 13 percent were performing tasks which did not group with any of the other defined jobs. Some of the job titles given by respondents which were representative of these personnel include: Product Improvement Technician, Resource Advisor, Flight Line Expediter, Production Supervisor, Career Development Course Writer, Deficiency Analyst, and Technical Order (TO) Acquisition Technician.

Group Descriptions

The following paragraphs contain brief descriptions of the two clusters and four jobs identified through the career ladder structure analysis. Appendix A lists representative tasks performed by identified cluster and job groups. Table 3 displays time spent on duties, while Table 4 provides demographic information for each cluster and job discussed within this report.

Another way to illustrate these jobs is to summarize tasks performed into groups of tasks (task modules). This allows for a very concise display of where job incumbents spend most of their time and develops a comprehensive overview of each job. The display shows the number of tasks included in a module, the average percent time spent on that module, a cumulative amount of time spent on the listed modules, and finally, an average percent of members performing the particular task module. These modules were identified through CODAP coperformance clustering, which calculates the probability that members who perform one task will also perform a second task or group of related tasks. Representative task modules are listed as part of the job description. The list of modules with respective tasks is presented in Appendix B.

8

TABLE 3

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES	IN-FLIGHT MAINTENANCE JOB (STG31)	ON/OFF EQUIPMENT MAINTENANCE CLUSTER (STG27)	BACK SHOP MAINTENANCE JOB (STG38)
A ORGANIZING AND PLANNING	2	1	*
B DIRECTING AND IMPLEMENTING	2	2	2
C INSPECTING AND EVALUATING	1	1	1
D TRAINING	4	2	2
E PERFORMING ADMINISTRATIVE AND SUPPLY FUNCTIONS	2	3	7
F PERFORMING CORE AUTOMATED AND MAINTENANCE SYSTEM (CAMS) ACTIVITIES	2	6	15
G PERFORMING GENERAL RADAR MAINTENANCE	1	11	16
H PERFORMING AIRBORNE RADAR TECHNICIAN (ART) IN-FLIGHT CREW DUTIES	28	1	*
I PERFORMING COMMON AIRCREW DUTIES	23	1	*
J MAINTAINING PECULIAR TEST EQUIPMENT	*	1	16
K PERFORMING LOWER COMPARTMENT AND MISSION COMPARTMENT HOT-MOCKUP FUNCTIONS	2	3	15
L MAINTAINING MISSION CREW COMPARTMENT EQUIPMENT (IN-FLIGHT AND GROUND)	23	30	1
M MAINTAINING LOWER COMPARTMENT EQUIPMENT (IN-FLIGHT AND GROUND)	2	17	4
N MAINTAINING INTERROGATION IDENTIFICATION FRIEND OR FOE (IFF) EQUIPMENT (IN-FLIGHT AND GROUND)	4	7	20
O MAINTAINING ANTENNA PEDESTAL EQUIPMENT	*	7	*
P PERFORMING MOBILITY TASKS	4	2	*
Q PERFORMING CREW CHIEF CROSS-UTILIZATION TRAINING (CUT) TASKS	*	5	1

* Denotes less than 1 percent

9

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY CAREER LADDER JOBS

DUTIES		TECHNICAL TRAINING SCHOOL JOB (STG32)	FIELD TRAINING DETACHMENT JOB (STG20)	MAINTENANCE CLUSTER (STG24)
A	ORGANIZING AND PLANNING	4	3	17
B	DIRECTING AND IMPLEMENTING	5	4	17
C	INSPECTING AND EVALUATING	1	2	14
D	TRAINING	44	13	11
E	PERFORMING ADMINISTRATIVE AND SUPPLY FUNCTIONS	12	3	15
F	PERFORMING CORE AUTOMATED AND MAINTENANCE SYSTEM (CAMS) ACTIVITIES	11	*	11
G	PERFORMING GENERAL RADAR MAINTENANCE	11	8	3
H	PERFORMING AIRBORNE RADAR TECHNICIAN (ART) IN-FLIGHT CREW DUTIES	*	*	*
I	PERFORMING COMMON AIRCREW DUTIES	*	*	2
J	MAINTAINING PECULIAR TEST EQUIPMENT	2	6	*
K	PERFORMING LOWER COMPARTMENT AND MISSION COMPARTMENT HOT-MOCKUP FUNCTIONS	*	*	*
L	MAINTAINING MISSION CREW COMPARTMENT EQUIPMENT (IN-FLIGHT AND GROUND)	*	40	3
M	MAINTAINING LOWER COMPARTMENT EQUIPMENT (IN-FLIGHT AND GROUND)	*	2	1
N	MAINTAINING INTERROGATION IDENTIFICATION FRIEND OR FOE (IFF) EQUIPMENT (IN-FLIGHT AND GROUND)	10	18	*
O	MAINTAINING ANTENNA PEDESTAL EQUIPMENT	*	1	1
P	PERFORMING MOBILITY TASKS	*	*	4
Q	PERFORMING CREW CHIEF CROSS-UTILIZATION TRAINING (CUT) TASKS	*	*	1

* Denotes less than 1 percent

TABLE 4

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS

	IN-FLIGHT MAINTENANCE JOB (STG 31)	ON/OFF EQUIPMENT MAINTENANCE CLUSTER (STG 27)	BACK SHOP MAINTENANCE JOB (STG 38)
NUMBER IN GROUP	84	85	12
PERCENT OF SAMPLE	36%	37%	5%
DAFSC DISTRIBUTION			
1A533	35%	0%	0%
1A553	44%	0%	0%
1A573	21%	0%	0%
2A134	0%	39%	42%
2A154	0%	49%	50%
2A174	0%	12%	8%
PAYGRADE DISTRIBUTION			
E-1 TO E-3	21%	31%	42%
E-4	25%	27%	50%
E-5	31%	25%	0%
E-6	15%	16%	8%
E-7	8%	1%	0%
E-8	0%	0%	0%
E-9	0%	0%	0%
AVERAGE NUMBER OF TASKS PERFORMED	197	244	89
AVERAGE MONTHS TAFMS	103	87	49
PERCENT IN FIRST ENLISTMENT	30%	40%	67%
PERCENT SUPERVISING	40%	44%	25%

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR CAREER LADDER JOBS

	TECHNICAL TRAINING SCHOOL JOB (STG 32)	FIELD TRAINING DETACHMENT JOB (STG 20)	MANAGEMENT CLUSTER (STG 24)
NUMBER IN GROUP	5	5	12
PERCENT OF SAMPLE	2%	2%	5%
DAFSC DISTRIBUTION			
1A533	0%	0%	0%
1A553	0%	0%	0%
1A573	0%	0%	8%
2A134	0%	0%	0%
2A154	60%	40%	17%
2A174	40%	60%	75%
PAYGRADE DISTRIBUTION			
E-1 TO E-3	0%	0%	0%
E-4	0%	0%	0%
E-5	20%	100%	17%
E-6	80%	0%	25%
E-7	0%	0%	58%
E-8	0%	0%	0%
E-9	0%	0%	0%
AVERAGE NUMBER OF TASKS PERFORMED	29	70	101
AVERAGE MONTHS TAFMS	173	119	180
PERCENT IN FIRST ENLISTMENT	0%	0%	0%
PERCENT SUPERVISING	20%	20%	100%

I. IN-FLIGHT MAINTENANCE JOB
(STG31). The 84 members of this job represent 36 percent of the total survey sample. This is the core work of the Airborne Radar Systems career ladder, performed by 98 percent of all surveyed AFSC 1A5X3 personnel. Personnel with the In-flight Maintenance job are aircrew members onboard the E-3 Sentry (AWACS) aircraft who spend most of their time monitoring the performance of aircraft radar systems. However, they have little opportunity and few facilities to actually repair malfunctioning radar components during a mission. In most cases, equipment malfunctions are documented and reported to On/Off Equipment Maintenance cluster personnel for repair. On average, In-flight Maintenance job members perform 197 tasks, primarily concentrating on Airborne Radar Technician (ART) in-flight crew duties, mission crew compartment maintenance, and common aircrew duties. Survey data show 74 percent of their overall job time is spent in these three duty areas (see Table 3). Representative tasks for this job include:

IN-FLIGHT MAINTENANCE JOB	
Number of members	84
Percent of total sample	36%
Average number of tasks performed	197
Average time in present job	4 yrs
Average time in career field	7 yrs
Average TAFMS	9 yrs
Predominant DAFSC	1A553
Predominant paygrades	E-4/E-5

- Decode octal, binary, or decimal readouts
- Coordinate surveillance radar power-ups with mission crew commanders (MCCs)
- Visually check to ensure passengers are secure and in position prior to takeoffs, landings, and air refuelings
- Notify flight engineers (FEs) when rear doors closed, escape slides engaged, and emergency lights armed prior to engine starts
- Notify MCCs and air surveillance officers (ASOs) when IFF is operational
- Analyze equipment for best mission configurations
- Coordinate IFF or surveillance radar in-flight with MCCs or ASOs
- Perform walkaround inspections after takeoffs

Representative task modules for this job include:

TM	Module Title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0005	General airborne radar systems/ aircrew duties	93	49	49	91
0001	Mechanical mission crew compartment fault isolation	33	18	67	91
0002	Manual mission crew compartment fault isolation	10	3	70	64

These data clearly show the emphasis of this job toward aircrew duties and tasks, since incumbents spend nearly half of their cumulative time in that one task module. As expected, mission crew compartment fault isolation tasks are also highly emphasized by members of the In-flight Maintenance job.

Respondents holding this job vary widely across experience levels, paygrades, and skill levels. The primary reason is that members in the In-flight Maintenance job occupy one-deep positions on the E-3 aircraft. As a result, this job remains fairly technical for all incumbents, regardless of rank or experience levels. For example, the average time in the AFSC 1A5X3 career field for all In-flight Maintenance job members is just under 7 years. However, incumbents in this job range from less than 1 year to over 16 years' experience in the AFSC 1A5X3 career ladder. Survey data also show that this job is performed by personnel in paygrades ranging from E-3 through E-7 (primarily by E-4 and E-5 personnel). Additionally, skill-level data for this job group indicate a fairly even distribution across all skill levels. Thirty-five percent of incumbents hold DAFSC 1A533, 44 percent hold DAFSC 1A553, and 21 percent hold DAFSC 1A573. Table 4 shows expanded background data across career ladder jobs.

14

II. ON/OFF EQUIPMENT MAINTENANCE CLUSTER (STG27). The 85 members of this cluster represent 37 percent of the total survey sample and 58 percent of all surveyed AFSC 2A1X4 personnel. This cluster represents the core work of the AFSC 2A1X4 career ladder, On/Off Equipment Maintenance cluster members are very similar to In-flight Maintenance job incumbents with respect to the E-3 Sentry (AWACS) aircraft radar equipment they maintain. However, On/Off Equipment Maintenance members perform virtually no aircrew duties (unlike their airborne counterparts). Instead, they spend their time performing on-equipment maintenance and repairing problems noted during operational missions. They also perform scheduled maintenance on surveillance radar and interrogator systems. As such, much of their effort is in isolating malfunctioning radar equipment, using both mechanical and manual techniques. Once problem components are identified, incumbents of this cluster are responsible for the removal, repair, and replacement of these components. Members spend 47 percent of their time maintaining mission crew compartment and lower compartment equipment (see Table 3). Representative tasks for this cluster include:

ON/OFF EQUIPMENT MAINTENANCE CLUSTER	
Number of members	85
Percent of total sample	37%
Average number of tasks performed	244
Average time in present job	3 yrs
Average time in career field	5 yrs
Average TAFMS	7 yrs
Predominant DAFSC	2A154
Predominant paygrades	E-3/E-4/E-5

- Interpret on-line radar control maintenance panel (RCMP) display messages
- Trace signals through circuits using schematics or wiring diagrams
- Remove or replace SF-6 bottles
- Fault isolate radar data correlators (RDCs) using built-in test/fault isolation tests (BIT/FITs)
- Inhibit or enable individual tests on surveillance radars
- Open or close Core Automated Maintenance System (CAMS)
- Perform power-off entry or exit procedures in antenna pedestals
- Remove or replace circuit card assemblies within surveillance radars, other than RDCs

15

This cluster can further be described by the following list of representative task modules:

TM	Module Title	No. of Tsks	Percent Time Spent (Sum)	Percent Time Spent (Cumulative)	Average Percent Members Performing
0013	Remove/replace equipment maintenance	186	46	46	64
0001	Mechanical mission crew compartment fault isolation	33	16	62	89
0012	CAMS and general radar maintenance	28	11	73	74

Note that nearly half of their cumulative time is spent on tasks associated in the equipment removal and replacement module. Furthermore, the mechanical mission crew compartment fault isolation module accounts for an additional 16 percent of these members' overall job time.

Eighty-eight percent of the incumbents in this cluster possess the 3- or 5-skill level (see Table 4). The vast majority, 86 percent, are members of Air Combat Command.

This cluster contains two distinct jobs. The first, the Entry Level On/Off Equipment Maintainer job, consists of less experienced members (88 percent have less than 2 years in the career ladder) who perform a relatively low number of tasks (91). Most possess DAFSC 2A134, and over half are in paygrade Airman First Class or below. Over 40 percent of their time is spent maintaining mission crew compartment equipment.

The second job, the On/Off Equipment Technician job, consists of more experienced members (averaging 5 years in the career ladder) who perform nearly three times as many tasks as their entry-level counterparts (average of 262 tasks performed). They are generally higher ranking and more skilled in their duties. As with the entry-level job, On/Off Equipment Technicians spend the highest percentage of their time maintaining mission crew compartment equipment. However, higher emphasis is placed on other duty areas, particularly lower compartment and pedestal equipment maintenance.

III. BACK SHOP MAINTENANCE JOB (STG38).

The 12 members of this job perform a relatively low number of tasks (89). This job represents 5 percent of the total survey sample, and all members are stationed at Tinker Air Force Base, Oklahoma. They focus heavily on maintaining IFF and peculiar test equipment (see Table 3). In addition, they perform many bench check functions, particularly on radar test sets. A high percentage of their time is spent performing lower compartment and mission crew compartment hot-mockup functions and using the CAMS system. Representative tasks for the Back Shop Maintenance job include:

BACK SHOP MAINTENANCE JOB	
Number of members	12
Percent of total sample	5%
Average number of tasks performed	89
Average time in present job	2 yrs
Average time in career field	3 yrs
Average TAFMS	4 yrs
Predominant DAFSCs	2A134/2A154
Predominant paygrades	E-3/E-4

- Open or close CAMS
- Repair processor memory control units (PMCUs)
- Repair fast fourier transform (FFT) test sets
- Bench check FFT test sets
- Bench check APM-401 radar test sets
- Bench check APM-402 radar test sets
- Repair APM-401 test sets
- Repair APM-402 test sets
- Bench check IFF receiver-transmitter (RT) units

Representative task modules include:

TM	Module Title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0012	CAMS and general equipment maintenance	28	25	25	61
0009	IFF Bench check and repair	11	15	40	79
0018	Peculiar test equipment maintenance	12	14	54	98
0016	Hot-mockup functions/operational checks	34	13	67	43

Unlike the On/Off Equipment Maintenance cluster, members of the Back Shop Maintenance job show a concentration on maintaining specific radar components rather than removing and replacing radar equipment.

This job is comprised of mostly junior members in the career ladder (see Table 4). The average TAFMS for incumbents is just over 4 years. Ninety-two percent possess the 3- or 5-skill level.

IV. TECHNICAL TRAINING SCHOOL JOB (STG32). The five members of this job represent 2 percent of the total surveyed population. All members of this group are AFSC 2A1X4 and are assigned to the technical training school at Keesler Air Force Base, Mississippi. Fifty-six percent of their time is spent performing training, administrative, and supply tasks (see Table 3). In addition, incumbents conduct training on CAMS, general radar maintenance, and IFF equipment maintenance. No maintenance is done on operational aircraft. Representative tasks include:

TECHNICAL TRAINING SCHOOL JOB	
Number of members	5
Percent of total sample	2%
Average number of tasks performed	29
Average time in present job	3 yrs
Average time in career field	12 yrs
Average TAFMS	14 yrs
Predominant DAFSCs	2A154/2A174
Predominant paygrade	E-6

- Conduct resident course classroom training
- Prepare lesson plans
- Score tests
- Write test questions
- Administer tests, other than for aircrew member training
- Interpret block or schematic diagrams of surveillance radar functional groups
- Trace signals through circuits using schematics or wiring diagrams
- Open or close CAMS

This job can be further described by the following list of task modules:

TM	Module Title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0011	Formal training	10	39	39	70
0012	CAMS and general radar maintenance	28	23	62	25
0009	IFF Bench check and repair	11	10	72	38
0008	Administration and evaluation	24	9	81	14

18

As expected, the formal training module consumes the highest portion of cumulative time for this job (39 percent). Incumbents spend an additional 23 percent of their time in the CAMS and general radar maintenance task module. Again, actual radar maintenance tasks are performed in a training setting rather than on operational aircraft.

Technical Training School job members average over 12 years in the Airborne Warning and Control Radar (AFSC 2A1X4) career field. All hold either a 5- or 7-skill level (see Table 4). This job's predominant paygrade is technical sergeant. Eighty percent have completed at least one Community College of the Air Force (CCAF) associate degree.

V. FIELD TRAINING DETACHMENT JOB (STG20). This job focuses primarily on training mission crew compartment and IFF equipment repair. All members are stationed at Tinker Air Force Base, Oklahoma. Traditional classroom instruction and training tasks further define this job (see Table 3). As with the Technical Training School job, actual equipment maintenance tasks are performed in a training, rather than an operational, environment. This job represents 2 percent of the total survey sample. Representative tasks for this job include:

FIELD TRAINING DETACHMENT JOB	
Number of members	5
Percent of total sample	2%
Average number of tasks performed	70
Average time in present job	3 yrs
Average time in career field	9 yrs
Average TAFMS	10 yrs
Predominant DAFSCs	2A154/2A174
Predominant paygrades	E-5

- Recycle radar programs
- Operate magnetic tape transport (MTT) radar programs, including surveillance or airborne operations
- Prepare lesson plans
- Monitor liquid cooling system (LCS) meters and gauges
- Trace signals through circuits using schematics or wiring diagrams
- Evaluate progress of trainees
- Troubleshoot wiring or coaxial cables

Representative task modules include:

TM	Module Title	No. of Tsks	Percent Time Spent (Sum)	Percent Time Spent (Cumulative)	Average Percent Members Performing
0001	Mechanical mission crew compartment fault isolation	33	31	31	59
0013	Remove/replace equipment maintenance	186	12	43	91
0011	Formal training	10	8	51	58
0017	IFF bench check functions	5	6	57	80

These task modules indicate a high degree of "hands-on" training associated with mission crew compartment fault isolation and equipment removal and replacement. The formal training module only accounts for 8 percent of Field Training Detachment School job members' overall job time.

Members belong to Air Education and Training Command and average 9 years and 5 months in the AFSC 2A1X4 career ladder. Eighty percent have completed at least one CCAF associate degree. Furthermore, all incumbents are staff sergeants and possess the 5- or 7-skill level (see Table 4).

VI. MANAGEMENT CLUSTER (STG24). The 12 members of this cluster are all direct supervisors. They reported spending 59 percent of their time in traditional supervisory duties: organizing, planning, directing, implementing, inspecting, evaluating, and training. Another 26 percent of their time is spent performing administration, supply, and CAMS activities (see Table 3). They represent 5 percent of the total survey sample. Representative tasks for this cluster include:

MANAGEMENT CLUSTER	
Number of members	12
Percent of total sample	5%
Average number of tasks performed	101
Average time in present job	2 yrs
Average time in career field	12 yrs
Average TAFMS	15 yrs
Predominant DAFSC	2A174
Predominant paygrade	E-7

- Supervise personnel in career ladders other than AFSCs 118X2 (1A5X3) or 455X4 (2A1X4)
- Interpret policies, directives, or procedures for subordinates
- Counsel personnel on personal or military-related problems
- Perform performance feedback sessions
- Establish work priorities

- Conduct or participate in staff meetings
- Establish performance standards for subordinates
- Establish work priorities

Representative task modules are:

TM	Module Title	No. of Tsks	Percent Time Spent (Sum)	(Cumulative)	Average Percent Members Performing
0007	Supervision and manpower	26	24	24	74
0008	Administration and evaluation	24	22	46	65
0012	CAMS and general radar maintenance	28	10	56	37
0010	Publications, files, and libraries administration	17	9	65	34

As expected, members of the Management cluster spend high percentages of time in management-related task modules, particularly those related to supervision, manpower, administration, and evaluation.

Incumbents average nearly 12 years in their respective career ladders, and most (58 percent) are master sergeants (see Table 4). All are assigned to Air Combat Command and average 15 years' TAFMS. Only 25 percent have a CCAF associate degree, although the remaining 75 percent are actively registered in the CCAF and are actively pursuing their degree.

This cluster contains two jobs. The first, the Ground Maintenance Management job, contains seven members who are direct first-line supervisors. These incumbents generally oversee maintenance actions of surveillance radar and interrogator equipment. Predominant duty titles for this group are "Shop Chief" and "Flight Superintendent." Incumbents perform an average of 132 tasks, and all are in the AFSC 2A1X4 career ladder.

The second job is the Staff Management job. Members of this group represent both career ladders (although 80 percent are AFSC 2A1X4 personnel). They perform a relatively low number of tasks (56). Unlike their Ground Maintenance Management job counterparts, incumbents of the Staff Management job perform virtually no equipment maintenance tasks. Instead, these respondents perform many administrative functions, to include: reviewing publications; planning briefings; maintaining TO libraries; establishing office instructions, organizational policies, and standard operating procedures.

Summary

In summary, career ladder structure analysis identified two clusters and four jobs: In-flight Maintenance job, On/Off Equipment Maintenance cluster, Back Shop Maintenance job, Technical Training School job, Field Training Detachment job, and Management cluster.

Specialty Job Satisfaction Analysis

An examination of job satisfaction indicators can give career managers a better understanding of factors that may affect the job performance of career ladder airmen. Therefore, the survey booklet included questions about job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions.

Table 5 presents job satisfaction responses for clusters and job groups within the survey sample. These responses suggest a high degree of overall satisfaction for all identified job groups and clusters, with the exception of members with the Back Shop Maintenance job, who had the lowest responses in every applicable category.

AFSC 1A5X3 RESULTS

Analysis of DAFSC Groups

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis examines differences in tasks performed between skill levels. This information may then be used to evaluate how well career ladder documents, such as AFMAN 36-2108 Specialty Descriptions, reflect what career ladder personnel are actually doing in the field.

The distribution of AFSC 1A5X3 skill-level groups across career ladder clusters and jobs is displayed in Table 6. As can be seen, almost all AFSC 1A5X3 personnel across all skill levels are performing the core job of their career ladder, the In-flight Maintenance job. Since this job is a one-deep position onboard the E-3 Sentry (AWACS) aircraft, personnel at all skill levels concentrate on similar technical tasks. For this reason, an atypical pattern of progression is noted within the AFSC 1A5X3 career ladder, with personnel at all skill levels concentrating on fairly technical tasks, rather than only lower skill-level members.

Table 7 offers another perspective by displaying the relative percent time spent on each duty across skill-level groups. As expected, all skill-level groups across the career ladder concentrate on airborne radar technician (ART) in-flight crew duties, common aircrew duties, and mission

TABLE 5

JOB SATISFACTION INDICATORS FOR JOB GROUPS
(PERCENT MEMBERS RESPONDING)

	IN-FLIGHT MAINTENANCE JOB (N=84)	ON/OFF EQUIPMENT MAINTENANCE CLUSTER (N=85)	BACK SHOP MAINTENANCE JOB (N=12)
EXPRESSED JOB INTEREST			
INTERESTING	76	82	33
SO-SO	18	8	50
DULL	6	8	17
DID NOT RESPOND	0	2	0
PERCEIVED USE OF TALENTS			
EXCELLENT TO PERFECT	7	12	0
FAIRLY WELL TO VERY WELL	75	76	50
NONE TO VERY LITTLE	18	12	50
PERCEIVED USE OF TRAINING			
EXCELLENT TO PERFECT	23	16	0
FAIRLY WELL TO VERY WELL	73	77	42
NONE TO VERY LITTLE	4	7	58
SENSE OF ACCOMPLISHMENT FROM JOB			
SATISFIED	81	80	42
NEUTRAL	5	2	25
DISSATISFIED	14	18	33
REENLISTMENT INTENTIONS			
YES OR PROBABLY YES	81	69	50
NO OR PROBABLY NO	14	26	50
WILL RETIRE	5	5	0

TABLE 5 (CONTINUED)

JOB SATISFACTION INDICATORS FOR JOB GROUPS
(PERCENT MEMBERS RESPONDING)

	TECHNICAL TRAINING SCHOOL JOB (N=5)	FIELD TRAINING DETACHMENT JOB (N=5)	MANAGEMENT CLUSTER (N=12)
EXPRESSED JOB INTEREST			
INTERESTING	80	100	75
SO-SO	20	0	17
DULL	0	0	8
PERCEIVED USE OF TALENTS			
EXCELLENT TO PERFECT	60	60	17
FAIRLY WELL TO VERY WELL	40	40	58
NONE TO VERY LITTLE	0	0	25
PERCEIVED USE OF TRAINING			
EXCELLENT TO PERFECT	60	40	0
FAIRLY WELL TO VERY WELL	40	60	75
NONE TO VERY LITTLE	0	0	25
SENSE OF ACCOMPLISHMENT FROM JOB			
SATISFIED	80	100	58
NEUTRAL	20	0	17
DISSATISFIED	0	0	25
REENLISTMENT INTENTIONS			
YES OR PROBABLY YES	80	100	58
NO OR PROBABLY NO	0	0	8
WILL RETIRE	20	0	34

TABLE 6

DISTRIBUTION OF DAFSC 1A5X3 SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS
(PERCENT)

JOBS	DAFSC 1A533 (N=29)	DAFSC 1A553 (N=37)	DAFSC 1A573 (N=20)
IN-FLIGHT MAINTENANCE JOB	100	100	90
ON/OFF EQUIPMENT MAINTENANCE CLUSTER	0	0	0
BACK SHOP MAINTENANCE JOB	0	0	0
TECHNICAL TRAINING SCHOOL JOB	0	0	0
FIELD TRAINING DETACHMENT JOB	0	0	0
MANAGEMENT CLUSTER	0	0	5
NOT GROUPED	0	0	5

TABLE 7

TIME SPENT ON DUTIES BY MEMBERS OF DAFSC 1A5X3 SKILL-LEVEL GROUPS
(RELATIVE PERCENT OF JOB TIME)

DUTIES	DAFSC 1A533 (N=29)	DAFSC 1A553 (N=37)	DAFSC 1A573 (N=20)
A ORGANIZING AND PLANNING	*	2	6
B DIRECTING AND IMPLEMENTING	*	3	6
C INSPECTING AND EVALUATING	*	1	4
D TRAINING	1	5	7
E PERFORMING ADMINISTRATIVE AND SUPPLY FUNCTIONS	1	2	7
F PERFORMING CORE AUTOMATED AND MAINTENANCE SYSTEM (CAMS) ACTIVITIES	*	*	*
G PERFORMING GENERAL RADAR MAINTENANCE	2	1	1
H PERFORMING AIRBORNE RADAR TECHNICIAN (ART) IN-FLIGHT CREW DUTIES	33	27	21
I PERFORMING COMMON AIRCREW DUTIES	26	22	18
J MAINTAINING PECULIAR TEST EQUIPMENT	*	*	*
K PERFORMING LOWER COMPARTMENT AND MISSION COMPARTMENT HOT-MOCKUP FUNCTIONS	3	2	2
L MAINTAINING MISSION CREW COMPARTMENT EQUIPMENT (IN-FLIGHT AND GROUND)	24	23	19
M MAINTAINING LOWER COMPARTMENT EQUIPMENT (IN-FLIGHT AND GROUND)	2	2	2
N MAINTAINING INTERROGATION IDENTIFICATION FRIEND OR FOE (IFF) EQUIPMENT (IN-FLIGHT AND GROUND)	5	4	4
O MAINTAINING ANTENNA PEDESTAL EQUIPMENT	*	*	*
P PERFORMING MOBILITY TASKS	3	5	3
Q PERFORMING CREW CHIEF CROSS-UTILIZATION TRAINING (CUT) TASKS	*	1	*

* Indicates less than 1 percent

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

crew compartment maintenance. Seven-skill level members do perform some supervisory duties, but continue to work primarily in the three previously mentioned duties. Specific skill-level group discussions are presented below.

Skill-Level Descriptions and Comparisons

DAFSC 1A533. The 29 airmen holding the 3-skill level perform the In-flight Maintenance job (see Table 6) and spend 59 percent of their time performing ART in-flight crew duties and common aircrew duties. They average 2 years, 5 months in the career field and perform an average of 178 tasks. All claim their job title as either (1) Airborne Radar Systems Operator or (2) Airborne Radar Technician.

Examples of tasks likely to be performed by DAFSC 1A5X3 personnel include analyzing equipment for best mission configurations, performing preflight checks of emergency equipment, and performing walkaround inspections after takeoffs. Other examples of common tasks performed by a majority of these airmen are shown in Table 8.

DAFSC 1A553. Five-skill level members perform an average of 195 tasks and average 7 years and 7 months in the AFSC 1A5X3 career field. Table 6 shows all 37 members of this group perform the In-flight Maintenance job. Seventy-two percent of their time is spent performing ART in-flight crew duties, mission crew compartment maintenance, and common aircrew duties. Table 9 lists representative tasks for these members.

As Table 9 clearly shows, DAFSC 1A553 personnel perform tasks very similar to those performed by 3-skill level members. Tasks which best distinguish 5-skill level personnel from their junior 3-skill level counterparts are presented in Table 10. As expected, the key difference between these two groups is a modest emphasis on training and supervisory functions by 5-skill level members. Examples of tasks with the greatest difference in members performing include conducting in-flight training, writing Enlisted Performance Reports (EPR), participating in staff meetings, and conducting briefings.

DAFSC 1A573. Seven-skill level members in this career ladder, unlike most conventional Air Force specialties, continue to perform a large number of technical tasks (21). The 20 members of this group average 11 years and 9 months in the career field. As with 3- and 5-skill level members, 7-skill level members spend the majority of their time (58 percent) performing ART in-flight crew duties, mission crew compartment maintenance, and common aircrew duties. Table 6 indicates 90 percent remain in the In-flight Maintenance job. Examples of tasks performed by DAFSC 1A573 members include participating in crew operation briefings, analyzing surveillance radar test results, and performing preflight inspections of personnel life support equipment. Table 11 lists representative tasks for these incumbents.

TABLE 8

REPRESENTATIVE TASKS PERFORMED BY DAFSC 1A533 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=29)
H215	Analyze equipment for best mission configurations	100
H239	Decode octal, binary, or decimal readouts	100
H234	Coordinate surveillance radar power-ups with MCCs	100
I297	Perform preflight checks of emergency equipment	100
I316	Study technical orders for abnormal and emergency in-flight procedures	100
I274	File airborne radar technician (ART) in-flight logs in aircraft history books	100
I299	Perform walkaround inspections after takeoffs	100
I311	Secure equipment for descents or landings	100
I281	Notify FEs when rear doors closed, escape slides engaged, and emergency lights armed prior to engine starts	100
H262	Transfer surveillance radar controls	100
I280	Notify FEs when emergency lights off and emergency escape slides stowed after engine shutdowns	100
I318	Visually check to ensure passengers are secure and in position prior to takeoffs, landings, or air refuelings	100
I270	Connect or disconnect emergency escape slides	100
I308	Review mission operations read files (MORFs)	100
H220	Coordinate IFF controls with ASOs	100
I312	Secure rear doors of aircraft prior to engine starts	100
H249	Notify MCCs when surveillance radars and IFFs are in standby for air refuelings	100
H244	Notify MCCs and ASOs when IFF is operational	100
I309	Review or annotate aircraft writeups on AFTO Forms 781-Series (Maintenance Discrepancy and Work Document)	100
I317	Turn on or turn off power to galleys	100
I310	Review or annotate flight orders	100
H246	Notify MCCs when cooling lights are out	100
I287	Operate galley equipment, such as ovens or coffee makers	100
H254	Perform EGW quantity check procedures	100

TABLE 9

REPRESENTATIVE TASKS PERFORMED BY DAFSC 1A553 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=37)
H215	Analyze equipment for best mission configurations	100
I316	Study technical orders for abnormal and emergency in-flight procedures	100
H257	Perform preflight checks of LCSs, power feeder duct cooling systems, and antenna cooling control panels	100
I318	Visually check to ensure passengers are secure and in position prior to takeoffs, landings, or air refuelings	100
H237	Debrief maintenance personnel on software or equipment malfunctions	100
H234	Coordinate surveillance radar power-ups with MCCs	100
H258	Perform preflight inspections of IFF units	100
H214	Advise maintenance personnel in identifying aircraft systems malfunctions	100
H222	Coordinate IFF or surveillance radar equipment status in-flight with MCCs or ASOs	100
H252	Participate in crew maintenance debriefings	100
H233	Coordinate surveillance radar equipment malfunctions with MCCs	100
H244	Notify MCCs and ASOs when IFF is operational	100
I281	Notify FEs when rear doors closed, escape slides engaged, and emergency lights armed prior to engine starts	100
I280	Notify FEs when emergency lights off and emergency escape slides stowed after engine shutdowns	100
I274	File airborne radar technician (ART) in-flight logs in aircraft history books	100
H239	Decode octal, binary, or decimal readouts	100
H250	Notify MCCs when surveillance radars are off	100
H246	Notify MCCs when cooling lights are out	100
L440	Perform radar turn-on or turn-off procedures under RCMP control	97
I305	Prepare or maintain airborne radar technician (ART) in-flight log forms	97
I298	Perform preflight inspections of personal life support equipment and oxygen equipment	97
I311	Secure equipment for descents or landings	97
L450	Recycle radar programs	97
I278	Maintain current status of flight manuals, safety and operational supplements, and flight crew checklists	97
L414	Fault isolate transmitters using BIT/FITs	97

29

TABLE 10

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 1A533 AND DAFSC 1A553 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 1A533 (N=29)	DAFSC 1A553 (N=37)	DIFFERENCE
H217	Call maintenance control for surveillance radar or identification friend or foe (IFF) equipment status	83	57	+26
J320	Adjust or align fast fourier transform (FFT) test sets	48	27	+21
D83	Conduct in-flight training	24	73	-49
C77	Write EPRs	3	51	-48
B27	Conduct or participate in staff meetings	3	51	-48
B26	Conduct briefings	10	57	-46
D104	Maintain training records, charts, or graphs	10	57	-46
D84	Conduct initial qualification training	7	49	-42
D106	Prepare lesson plans	24	65	-41
C73	Perform performance feedback (PFW) sessions	3	43	-40
B28	Conduct supervisory orientations of newly assigned personnel	3	43	-40
A20	Plan or schedule work assignments	3	43	-40
B30	Counsel personnel on personal or military-related problems	7	46	-39
D92	Determine in-flight training requirements	7	46	-39
A23	Schedule personnel for leaves, passes, or temporary duty (TDY)	3	40	-37
A19	Plan or prepare briefings	3	40	-37
C59	Conduct self-inspections	3	40	-37
Q672	Assist in E-3A ground refueling operations	3	40	-37
D85	Conduct mission qualification training	17	54	-37
D103	Implement training programs	7	43	-36
E131	Maintain currency requirements, such as flight physicals, life support training, or altitude chambers	21	57	-36
A14	Establish performance standards for subordinates	0	35	-35
A16	Establish work methods, controls, or procedures	0	35	-35
A22	Schedule personnel for alert or flight duty	3	38	-35
E145	Review publications, correspondence, or reports	7	41	-34
E133	Maintain flying or alert schedules	7	41	-34
B46	Supervise Airborne Radar Systems Specialists (AFSC 11852)	7	41	-34
D101	Evaluate progress of trainees	14	46	-32
D108	Score tests	3	35	-32
A17	Establish work priorities	3	35	-32

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY DAFSC 1A573 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=90)
I290	Participate in crew operation debriefings	95
I287	Operate galley equipment, such as ovens or coffee makers	95
L390	Analyze manual test results on surveillance radars	90
L389	Analyze automatic test results on surveillance radars	90
L418	Interpret on-line RCMP display messages	90
I298	Perform preflight inspections of personal life support equipment and oxygen equipment	90
I291	Participate in general or specialized mission briefings, such as intelligence or weather briefings	90
H239	Decode octal, binary, or decimal readouts	90
L424	Monitor automatic reconfigurations of surveillance radars	90
L426	Monitor locations displayed on RCMPs	90
I278	Maintain current status of flight manuals, safety and operational supplements, and flight crew checklists	90
I305	Prepare or maintain airborne radar technician (ART) in-flight log forms	90
L425	Monitor LCSs meters and gauges	90
L423	Monitor antenna pedestal equipment cooling systems	90
I304	Post changes to personal aircrew publications	90
H258	Perform preflight inspections of IFF units	90
H237	Debrief maintenance personnel on software or equipment malfunctions	90
L440	Perform radar turn-on or turn-off procedures under RCMP control	90
I292	Participate in life support training seminars	90
I299	Perform walkaround inspections after takeoffs	90
I311	Secure equipment for descents or landings	90
L416	Inhibit or enable individual tests on surveillance radars	90
H232	Coordinate surveillance radar controls with ASOs	90
N556	Perform operational IFF checkout procedures	90

In addition to their technical duties onboard the aircraft, 7-skill level members' responsibilities expand into management and supervisory tasks. Table 12 presents tasks which best distinguish 7-skill level personnel from 5-skill level members. Results confirm that DAFSC 1A573 respondents focus on administrative, supply, organization, and supervision tasks in addition to their aircrew duties.

AFMAN 36-2108 Specialty Descriptions Analysis

Survey data were compared to the AFMAN 36-2108 Specialty Descriptions for Airborne Radar Systems Specialists and Technicians, dated 15 March 1991, effective 30 April 1991. The descriptions for the 3-, 5-, and 7-skill levels were accurate, depicting the highly technical aspects of the job, as well as the general increase in supervisory responsibilities previously described in the DAFSC analysis. The descriptions also capture the primary responsibilities of AFSC 1A5X3 members in the applicable clusters and jobs identified by the job structure analysis process.

Training Analysis

Occupational surveys provide information which can be useful in the development and revision of relevant training programs. Factors used to evaluate entry-level AFSC 1A5X3 training include jobs being performed by first-enlistment personnel across career ladder jobs, percent first-job (1-24 months' TAFMS) and first-enlistment (1-48 months' TAFMS) members performing specific tasks, ratings of how much training emphasis tasks should receive in formal training, and relative TD ratings.

First-Enlistment Personnel Analysis

In this study, there are 25 AFSC 1A5X3 members in their first enlistment (1-48 months' TAFMS), representing 29 percent of all surveyed AFSC 1A5X3 personnel. All are members of the In-flight Maintenance job. Table 13 shows first-enlistment personnel spend approximately 82 percent of their time performing technical tasks such as ART in-flight crew duties, common aircrew duties, and mission crew compartment maintenance. Table 14 displays representative tasks performed by first-enlistment AFSC 1A5X3 personnel.

TE and TD Data

TE and TD data are secondary task factors that can help training development personnel decide which tasks to emphasize for entry-level training. These ratings, based on the judgments of senior career ladder NCOs at operational units, provide a rank-ordering of those tasks considered important for first-enlistment airmen training (TE) and a measure of the relative difficulty of those tasks (TD). When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can be made to determine if training adjustments are

TABLE 12

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 1A553 AND DAFSC 1A573 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 1A553 (N=37)	DAFSC 1A573 (N=20)	DIFFERENCE
P629	Accomplish mobility processing checklists	68	40	+28
P646	Participate in predeployment mobility briefings	62	35	+27
M483	Perform leak detection tests of SF-6 systems	27	5	+22
P644	Pack or unpack individual mobility equipment for deployments	57	35	+22
B44	Interpret policies, directives, or procedures for subordinates	30	80	-50
A13	Establish organizational policies, office instructions (OIs), or standing operating procedures (SOPs)	27	75	-48
E126	Inventory equipment, software, tools, or supplies	14	55	-41
B47	Supervise Airborne Radar Systems Technicians (AFSC 11872)	14	55	-41
E127	Maintain administrative files	19	60	-41
C78	Write staff studies, surveys, or special reports, other than training reports	0	40	-40
A4	Determine logistics requirements, such as equipment, personnel, or space	16	55	-39
B52	Supervise personnel in career ladders other than AFSCs 118X2 or 455X4	27	65	-38
A1	Assign personnel to duty positions	3	40	-37
C61	Conduct standardization evaluations	0	35	-35
A8	Develop organizational or functional charts	5	40	-35
E120	Escort visitors through facilities	5	40	-35
A19	Plan or prepare briefings	41	75	-34
E121	Establish equipment or software requirements	11	45	-34
B27	Conduct or participate in staff meetings	51	85	-34
D86	Conduct OJT	22	55	-33
C73	Perform performance feedback (PFW) sessions	43	75	-32
A10	Develop self-inspection programs	30	60	-30
A17	Establish work priorities	35	65	-30
E123	Examine historical data for recurring equipment problems	22	50	-28
B39	Implement cost-reduction programs	3	30	-27
E124	Identify or evaluate equipment or software problems	38	65	-27
D80	Assign course instructors	8	35	-27
D93	Determine OJT requirements	8	35	-27
C74	Select individuals for specialized training	14	40	-26
A7	Develop inspection procedures	14	40	-26
E125	Initiate technical order forms, such as AFTO Forms 22 or AFTO Forms 110 (Technical Order/CPIN Distribution Record)	30	55	-25
A18	Plan layouts of facilities	0	25	-25

TABLE 13

AVERAGE PERCENT TIME SPENT ON DUTIES
BY FIRST-ENLISTMENT AFSC 1A5X3 PERSONNEL

DUTIES		AVERAGE TIME SPENT
A	ORGANIZING AND PLANNING	*
B	DIRECTING AND IMPLEMENTING	*
C	INSPECTING AND EVALUATING	*
D	TRAINING	1
E	PERFORMING ADMINISTRATIVE AND SUPPLY FUNCTIONS	1
F	PERFORMING CORE AUTOMATED AND MAINTENANCE SYSTEM (CAMS) ACTIVITIES	*
G	PERFORMING GENERAL RADAR MAINTENANCE	2
H	PERFORMING AIRBORNE RADAR TECHNICIAN (ART) IN-FLIGHT CREW DUTIES	32
I	PERFORMING COMMON AIRCREW DUTIES	26
J	MAINTAINING PECULIAR TEST EQUIPMENT	*
K	PERFORMING LOWER COMPARTMENT AND MISSION COMPARTMENT HOT-MOCKUP FUNCTIONS	3
L	MAINTAINING MISSION CREW COMPARTMENT EQUIPMENT (IN-FLIGHT AND GROUND)	24
M	MAINTAINING LOWER COMPARTMENT EQUIPMENT (IN-FLIGHT AND GROUND)	2
N	MAINTAINING INTERROGATION IDENTIFICATION FRIEND OR FOE (IFF) EQUIPMENT (IN-FLIGHT AND GROUND)	5
O	MAINTAINING ANTENNA PEDESTAL EQUIPMENT	*
P	PERFORMING MOBILITY TASKS	3
Q	PERFORMING CREW CHIEF CROSS-UTILIZATION TRAINING (CUT) TASKS	1

* Denotes less than 1 percent

TABLE 14

REPRESENTATIVE TASKS PERFORMED BY
FIRST-ENLISTMENT AFSC 1A5X3 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=25)
H215	Analyze equipment for best mission configurations	100
I274	File airborne radar technician (ART) in-flight logs in aircraft history books	100
H234	Coordinate surveillance radar power-ups with MCCs	100
I316	Study technical orders for abnormal and emergency in-flight procedures	100
I297	Perform preflight checks of emergency equipment	100
I299	Perform walkaround inspections after takeoffs	100
I281	Notify FEs when rear doors closed, escape slides engaged, and emergency lights armed prior to engine starts	100
H262	Transfer surveillance radar controls	100
I280	Notify FEs when emergency lights off and emergency escape slides stowed after engine shutdowns	100
H220	Coordinate IFF controls with ASOs	100
I270	Connect or disconnect emergency escape slides	100
H249	Notify MCCs when surveillance radars and IFFs are in standby for air refuelings	100
I318	Visually check to ensure passengers are secure and in position prior to takeoffs, landings, or air refuelings	100
I308	Review mission operations read files (MORFs)	100
I311	Secure equipment for descents or landings	100
I307	Review and sign off flight crew information files (FCIFs)	100
H244	Notify MCCs and ASOs when IFF is operational	100
I312	Secure rear doors of aircraft prior to engine starts	100
I317	Turn on or turn off power to galleys	100
I309	Review or annotate aircraft write-ups on AFTO Forms 781-Series (Maintenance Discrepancy and Work Document)	100
H246	Notify MCCs when cooling lights are out	100
H239	Decode octal, binary, or decimal readouts	100
H254	Perform EGW quantity check procedures	100
H216	Brief mission crew commanders (MCCs) and air surveillance officers (ASOs) on surveillance radar or IFF equip status	96
L423	Monitor antenna pedestal equipment cooling systems	96
I305	Prepare or maintain airborne radar technician (ART) in-flight log forms	96
H222	Coordinate IFF or surveillance radar equipment status in-flight with MCCs or ASOs	96
L425	Monitor LCSs meters and gauges	96
H257	Perform preflight checks of LCSs, power feeder duct cooling systems, and antenna cooling control panels	96

35

necessary. For example, tasks receiving high ratings on both task factors (TE and TD), accompanied by moderate to high percentages performing, may warrant resident training. Those tasks receiving high task factor ratings, but low percentages performing, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for first-enlistment personnel. These decisions must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To assist training development personnel, AFOMS developed a computer program that uses these task factors and the percentage of first-enlistment personnel performing tasks to produce Automated Training Indicators (ATI). ATI correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 1, ATCR 52-22. ATI allow training developers to quickly focus attention on those tasks which are most likely to qualify for ABR course consideration.

Tasks having the highest TE ratings for AFSC 1A5X3 personnel are listed in Table 15. Included for each task are the percentage of first-job and first-enlistment personnel performing and the TD rating. As illustrated in Table 15, tasks with the highest TE ratings deal with establishing priorities for restoring equipment to operational status, maintaining current manuals and checklists, interpreting on-line radar control maintenance panel display messages, and knowing emergency in-flight procedures. These tasks are performed by high percentages of first-job and first-enlistment personnel.

Table 16 lists the tasks having the highest TD ratings. The percentages of first-job, first-enlistment, 5-, and 7-skill level personnel performing, and TE ratings are also included for each task. Most tasks with high TD ratings are technical functions dealing with manual fault isolation and analyses of radar equipment--tasks primarily performed by AFSC 2A1X4 personnel. For this reason, the majority of tasks with high TD ratings have low TE ratings and are performed by quite low percentages of AFSC 1A5X3 first-job, first-enlistment, 5-, and 7-skill level members.

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

Job Satisfaction Analysis

As stated in the Specialty Job Satisfaction Analysis section of this report, an examination of job satisfaction indicators can be very useful for career ladder managers as they attempt to determine possible factors affecting job performance of career ladder airmen. In addition to the previously discussed job satisfaction results for identified clusters and jobs, job satisfaction data can be expanded to provide indications of general attitudes within specific DAFSC groups.

TABLE 15

AFSC 1A5X3 TASKS WITH HIGHEST TRAINING EMPHASIS RATINGS

TASKS		TNG EMP	PERCENT MEMBERS PERFORMING 1ST JOB	1ST ENL	TSK DIF
H240	Establish priorities for restoring equipment to operations status	7.07	80	92	4.85
I278	Maintain current status of flight manuals, safety and operational supplements, and flight crew checklists	7.00	40	80	4.66
L418	Interpret on-line RCMP display messages	6.93	80	88	5.19
L420	Manually control surveillance radar parameters using keyboard actions	6.93	80	92	5.31
I316	Study technical orders for abnormal and emergency in-flight procedures	6.93	100	100	5.11
I295	Perform or practice emergency aircraft procedures	6.80	80	88	4.87
I304	Post changes to personal aircrew publications	6.80	80	92	5.11
I297	Perform preflight checks of emergency equipment	6.73	100	100	4.23
L407	Fault isolate RDCs using BIT/FITs	6.73	80	80	6.41
L414	Fault isolate transmitters using BIT/FITs	6.73	80	84	6.03
H223	Coordinate interface malfunction analyses with computer display maintenance technicians (CDMTs)	6.67	80	96	4.61
L405	Fault isolate RCMPs using BIT/FITs	6.60	80	88	5.45
L410	Fault isolate surveillance radar systems using BIT/FITs	6.60	80	88	5.82
L398	Fault isolate digital doppler processors (DDPs) using BIT/FITs	6.60	80	88	6.01
L408	Fault isolate stable local oscillators (STALOs) using BIT/FITs	6.60	80	88	5.92
H233	Coordinate surveillance radar equipment malfunctions with MCCs	6.53	80	96	4.38
H237	Debrief maintenance personnel on software or equipment malfunctions	6.53	80	92	4.19
L402	Fault isolate maritime surveillance capability (MSC) receivers using BIT/FITs	6.53	80	84	5.82
L427	Monitor system signal processing using FFTs or spectrum analyzers	6.47	80	92	6.51
L389	Analyze automatic test results on surveillance radars	6.47	80	92	5.75
L397	Fault isolate data communications using BIT/FITs	6.47	40	76	5.76
H232	Coordinate surveillance radar controls with ASOs	6.47	80	92	4.80
I298	Perform preflight inspections of personal life support equipment and oxygen equipment	6.47	100	96	4.23
L390	Analyze manual test results on surveillance radars	6.47	80	88	5.75
H230	Coordinate sensor settings with ASOs	6.47	60	88	4.35

TE MEAN = 1.81; S.D. = 2.14 (HIGH = 3.95)
TD MEAN = 5.00; S.D. = 1.00

TABLE 16

SAMPLE OF DAFSC 1A5X3 TASKS WITH HIGHEST TASK DIFFICULTY RATINGS

TASKS		TSK DIFF	PERCENT MEMBERS PERFORMING				TNG EMP
			1ST JOB	1ST ENL	DAFSC 1A553	DAFSC 1A573	
L437	Perform manual fault analyses of RDCs using processor memory control units (PMCUs) and diagnostic programs	7.37	20	8	8	10	0.07
O621	Remove or replace rotary joints	7.15	0	4	0	0	0.07
L406	Fault isolate RDCs manually	7.07	60	68	68	70	4.67
D 95	Develop advanced radar maintenance training set (ARMTS) software	6.98	0	4	0	5	0.53
L436	Perform manual fault analyses of DDPs using multiplex data displays (MDDs) and diagnostic tapes	6.97	20	8	5	5	0.07
A11	Establish budget or financial requirements	6.96	0	0	0	10	0.27
M472	Calibrate noise source diodes manually	6.91	0	4	0	5	0.07
M477	Fault isolate HV systems manually	6.78	0	12	22	35	1.60
D96	Develop new equipment training programs	6.78	0	4	3	20	1.00
L435	Perform malfunction analysis using harmonization programs	6.78	20	20	22	20	1.87
K377	Repair electronic waveguide switches	6.70	0	4	5	0	0.07
O611	Remove or replace noise source diodes	6.70	0	4	0	0	0.07
N578	Repair IFF RT ISLS switches	6.69	0	4	0	0	0.07
L399	Fault isolate DDPs manually	6.63	40	64	57	65	3.73
O612	Remove or replace orthomode junctions	6.61	0	4	0	0	0.07
D 97	Develop resident course or career development course (CDC) curriculum materials	6.58	0	4	0	0	0.07
G208	Repair card slots	6.56	20	8	0	5	0.27
O600	Remove or replace brush block assemblies	6.55	0	4	0	0	0.07
L434	Perform klystron power amplifier (KPA) burn-ins	6.54	20	12	0	5	0.40
B32	Direct flightline maintenance activities	6.54	0	4	0	0	0.40
C64	Evaluate individuals for promotion, demotion, or reclassification	6.53	0	4	16	30	1.27
O594	Remove or replace antenna waveguide switches	6.52	0	4	0	5	0.07
L427	Monitor system signal processing using FFTs or spectrum analyzers	6.51	80	92	84	85	6.47
O622	Remove or replace septum polarizers	6.51	0	4	0	0	0.07
A21	Prepare unit deployment or mobility plans	6.50	0	0	8	20	0.73
J336	Repair PMCUs	6.49	0	4	0	5	0.07
J334	Repair FFT test sets	6.49	0	4	3	5	0.07
N577	Repair IFF receivers	6.48	0	4	0	0	0.07
M551	Remove or replace strut waveguides	6.47	0	4	0	5	0.07
N582	Repair IFF video processors	6.46	0	4	0	0	0.07
O593	Remove or replace antenna waveguide pressure windows	6.44	0	4	0	0	0.07
M470	Adjust or align TAC thermal assemblies	6.43	0	4	0	5	0.27
N544	Bench check IFF RF detectors	6.42	0	4	0	0	0.07
M510	Remove or replace klystron solenoids	6.42	0	4	0	5	0.07

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 1.81; S.D. = 2.14 (HIGH = 3.95)

With this in mind, job satisfaction responses for AFSC 1A5X3 members were analyzed and provide the following comparisons: (1) among TAFMS groups of the AFSC 1A5X3 career ladder and a comparative sample of other aircrew specialists surveyed in 1992 and (2) between current and previous AFSC 1A5X3 TAFMS groups.

Table 17 shows the comparison of TAFMS group data of AFSC 1A5X3 personnel to a comparative sample of other aircrew AFSCs surveyed the previous calendar year. These data give a relative measure of how AFSC 1A5X3 personnel job satisfaction responses compare with similar Air Force specialties. Overall, job satisfaction for all three AFSC 1A5X3 TAFMS groups is generally positive. However, these respondents reported lower job satisfaction ratings than members of the comparative sample in many areas, most noticeably in perceived utilization of talents and training. For instance, only 4 percent of AFSC 1A5X3 members with 1-48 months' TAFMS perceived that their talents were being used excellently to perfectly. Other AFSC 1A5X3 TAFMS groups reported similar responses.

An indication of changes in job satisfaction perceptions within the career ladder is provided in Table 18, which presents TAFMS group data for current survey respondents and data from respondents to the last OSR of the AFSC 1A5X3 career ladder in 1989 (then AFSC 118X2). Generally, job satisfaction perceptions have remained fairly constant for all TAFMS groups when compared to the 1989 sample. First-enlistment personnel rated expressed job interest and perceived use of talents lower in the current study than in 1989. However, first- and second-enlistment respondents show a marked increase in positive reenlistment intentions.

AFSC 2A1X4 RESULTS

Analysis of DAFSC Groups

As stated in the AFSC 1A5X3 section of this report, an analysis of DAFSC groups is an important part of each occupational survey because it examines differences in tasks performed between skill levels.

The distribution of AFSC 2A1X4 skill-level groups across career ladder clusters and jobs is displayed in Table 19. As expected, most 3- and 5-skill level respondents are performing the core jobs of their career ladder in the On/Off Equipment Maintenance cluster. This career ladder follows a more typical career progression pattern than its AFSC 1A5X3 counterparts. Seven-level AFSC 2A1X4 personnel begin to depart from mostly technical tasks and move into more traditional supervisory and management positions.

TABLE 17

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 1A5X3
TAFMS GROUPS IN CURRENT SURVEY TO A COMPARATIVE SAMPLE
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	AFSC 1A5X3 (N=25)	COMP SAMPLE (N=208)	AFSC 1A5X3 (N=18)	COMP SAMPLE (N=196)	AFSC 1A5X3 (N=43)	COMP SAMPLE (N=522)
EXPRESSED JOB INTEREST						
INTERESTING	68	88	100	90	72	88
SO-SO	16	8	0	6	26	7
DULL	16	4	0	4	2	5
PERCEIVED USE OF TALENTS						
EXCELLENT TO PERFECT	4	24	17	31	5	30
FAIRLY WELL TO VERY WELL	64	63	78	58	81	59
NONE TO VERY LITTLE	32	13	6	11	14	11
PERCEIVED USE OF TRAINING						
EXCELLENT TO PERFECT	20	50	28	45	21	36
FAIRLY WELL TO VERY WELL	76	44	72	48	72	53
NONE TO VERY LITTLE	4	6	0	7	7	11
SENSE OF ACCOMPLISHMENT FROM JOB						
SATISFIED	80	84	100	86	72	82
NEUTRAL	0	5	0	4	9	6
DISSATISFIED	20	11	0	10	19	12
REENLISTMENT INTENTIONS						
YES OR PROBABLY YES	72	71	83	82	86	74
NO OR PROBABLY NO	28	29	17	18	5	8
WILL RETIRE	0	0	0	0	9	18

* Denotes less than 1 percent

NOTE: Comparative data sample is comprised of AFSC 1A0X1 (112X0), AFSC 1T2X1 (115X0), and AFSC 1A4X1 (117X0)

TABLE 18

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 1A5X3
TAFMS GROUPS IN CURRENT SURVEY TO 1989 AFSC 118X2 SURVEY
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	1993 (N=25)	1989 (N=24)	1993 (N=18)	1989 (N=26)	1993 (N=43)	1989 (N=48)
EXPRESSED JOB INTEREST						
INTERESTING	68	88	100	85	72	81
SO-SO	16	8	0	8	26	15
DULL	16	4	0	4	2	4
DID NOT RESPOND	0	0	0	3	0	0
PERCEIVED USE OF TALENTS						
FAIRLY WELL TO PERFECT	68	88	94	77	86	85
NONE TO VERY LITTLE	32	12	6	19	14	15
DID NOT RESPOND	0	0	0	4	0	0
PERCEIVED USE OF TRAINING						
FAIRLY WELL TO PERFECT	96	100	100	96	93	92
NONE TO VERY LITTLE	4	0	0	0	7	8
DID NOT RESPOND	0	0	0	4	0	0
SENSE OF JOB ACCOMPLISHMENT						
SATISFIED	80	75	100	73	72	69
NEUTRAL	0	21	0	12	9	8
DISSATISFIED	20	4	0	8	19	23
DID NOT RESPOND	0	0	0	7	0	0
REENLISTMENT INTENTIONS						
YES OR PROBABLY YES	72	58	83	65	86	81
NO OR PROBABLY NO	28	38	17	35	5	10
WILL RETIRE	0	4	0	0	9	6
DID NOT RESPOND	0	0	0	0	0	3

41

TABLE 19

DISTRIBUTION OF AFSC 2A1X4 SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS
(PERCENT)

JOBS	DAFSC 2A134 (N=41)	DAFSC 2A154 (N=65)	DAFSC 2A174 (N=40)
IN-FLIGHT MAINTENANCE JOB	0	0	0
ON/OFF EQUIPMENT MAINTENANCE CLUSTER	80	65	25
BACK SHOP MAINTENANCE JOB	12	9	3
TECHNICAL TRAINING SCHOOL JOB	0	5	5
FIELD TRAINING DETACHMENT JOB	0	3	8
MANAGEMENT CLUSTER	0	3	23
NOT GROUPED	8	15	36

42

Table 20 displays relative percent time spent on each duty across skill-level groups. Three- and 5- skill level personnel indicated spending the greatest amount of time in maintaining mission crew and lower compartment equipment. Seven-skill level members, as previously noted, concentrate on more supervisory and management duty categories. Specific skill-level group discussions are presented below.

Skill-Level Descriptions and Comparisons

DAFSC 2A134. The 41 airmen in the 3-skill level represent 28 percent of all surveyed AFSC 2A1X4 personnel. Eighty percent are members of the On/Off Equipment Maintenance cluster (see Table 19), and spend the greatest amount of time maintaining mission crew compartment equipment. They average 2 years and 10 months in the career field and perform an average of 169 tasks.

Table 21 presents representative tasks performed by a majority of these airmen. Examples of commonly performed tasks include using CAMS, performing power-off entry or exit procedures in antenna pedestals, and inspecting card slots.

DAFSC 2A154. Five-skill level members perform an average of 197 tasks and average 6 years, 11 months in the AFSC 2A1X4 career field. Table 19 shows that the majority (65 percent) belong to the On/Off Equipment Maintenance cluster. Five-skill level members spend the highest percentages of their time performing mission crew and lower compartment maintenance. In addition, they spend a slightly higher percentage of time performing CAMS activities than other AFSC 2A1X4 skill-level respondents. Table 22 lists representative tasks for these incumbents. Note that the four most commonly performed tasks all refer to the CAMS.

Table 23 presents tasks which best distinguish DAFSC 2A154 personnel from their 3-skill level counterparts. Five-skill level members spend more relative time performing supervisory and training tasks. Examples of tasks with the greatest difference between these two DAFSC groups are writing EPRs, establishing work priorities, and conducting OJT.

DAFSC 2A174. In contrast to their DAFSC 1A573 counterparts, DAFSC 2A174 members show a more typical tendency to move away from more technical tasks and into more traditional management areas. Only 25 percent of DAFSC 2A174 personnel remain in the On/Off Equipment Maintenance cluster (see Table 19). The 40 members of the DAFSC 2A174 group perform noticeably fewer tasks than their 3- and 5-skill level counterparts (115). Examples of tasks performed by DAFSC 2A174 members include establishing work priorities, performing CAMS functions, conducting self-inspections, and participating in staff meetings. Table 24 lists representative tasks for these respondents.

Increased emphasis by DAFSC 2A174 members toward evaluation, inspection, direction, and implementation dominates the major differences between DAFSC 2A174 and DAFSC 2A154 personnel. Table 25 presents an expanded list of tasks which best differentiate between these two DAFSC groups.

TABLE 20

TIME SPENT ON DUTIES BY MEMBERS OF AFSC 2A1X4 SKILL-LEVEL GROUPS
(RELATIVE PERCENT OF JOB TIME)

DUTIES		DAFSC 2A134 (N=41)	DAFSC 2A154 (N=65)	DAFS 2A174 (N=40)
A	ORGANIZING AND PLANNING	*	4	12
B	DIRECTING AND IMPLEMENTING	*	4	13
C	INSPECTING AND EVALUATING	*	3	8
D	TRAINING	*	5	13
E	PERFORMING ADMINISTRATIVE AND SUPPLY FUNCTIONS	7	6	11
F	PERFORMING CORE AUTOMATED AND MAINTENANCE SYSTEM (CAMS) ACTIVITIES	8	11	9
G	PERFORMING GENERAL RADAR MAINTENANCE	14	11	6
H	PERFORMING AIRBORNE RADAR TECHNICIAN (ART) IN-FLIGHT CREW DUTIES	1	*	0
I	PERFORMING COMMON AIRCREW DUTIES	*	*	*
J	MAINTAINING PECULIAR TEST EQUIPMENT	2	3	1
K	PERFORMING LOWER COMPARTMENT AND MISSION COMPARTMENT HOT-MOCKUP FUNCTIONS	5	4	1
L	MAINTAINING MISSION CREW COMPARTMENT EQUIPMENT (IN-FLIGHT AND GROUND)	28	19	11
M	MAINTAINING LOWER COMPARTMENT EQUIPMENT (IN-FLIGHT AND GROUND)	14	13	4
N	MAINTAINING INTERROGATION IDENTIFICATION FRIEND OR FOE (IFF) EQUIPMENT (IN-FLIGHT AND GROUND)	8	7	5
O	MAINTAINING ANTENNA PEDESTAL EQUIPMENT	5	5	2
P	PERFORMING MOBILITY TASKS	2	2	2
Q	PERFORMING CREW CHIEF CROSS-UTILIZATION TRAINING (CUT) TASKS	6	3	2

* Indicates less than 1 percent

TABLE 21

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2A134 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=41)
F159	Open or close CAMS	93
O589	Perform power-off entry or exit procedures in antenna pedestals	88
G179	Inspect card slots	88
G210	Safety wire surveillance radars or interrogator equipment	85
G183	Operate powered aerospace ground equipment (AGE), such as power units or liquid cooling system (LCS) carts	85
G212	Trace signals through circuits using schematics or wiring diagrams	85
G172	Clean facilities	83
Q675	Inspect ramp areas for foreign object damage (FOD) matter	83
F146	Access core automated maintenance system (CAMS) menus and data screens	83
G181	Interpret block or schematic diagrams of surveillance radar functional groups	83
L417	Install or remove SDU-34/E air alarm systems	80
M473	Connect or disconnect SF-6 ground service carts	80
L425	Monitor LCSs meters and gauges	80
M523	Remove or replace SF-6 bottles	78
L426	Monitor locations displayed on RCMPs	78
L415	Inhibit or enable automatic test sequences on surveillance radars	78
L424	Monitor automatic reconfigurations of surveillance radars	78
L423	Monitor antenna pedestal equipment cooling systems	78
L422	Mask continuously monitored parameters (CMPs)	78
G204	Remove or replace system PROMs	78

TABLE 22

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2A154 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=65)
F146	Access core automated maintenance system (CAMS) menus and data screens	82
F159	Open or close CAMS	82
F153	Clear or closeout completed surveillance radar or interrogator maintenance discrepancies in CAMS	75
F155	Create surveillance radar or interrogator or support equipment maintenance discrepancies in CAMS	74
G183	Operate powered aerospace ground equipment (AGE), such as power units or liquid cooling system (LCS) carts	74
G212	Trace signals through circuits using schematics or wiring diagrams	72
G172	Clean facilities	71
E113	Complete miscellaneous supply forms, such as AF Forms 2005 (Issue/Turn-in Request)	69
E115	Crate or uncrate parts for issue or turn-ins	69
G195	Remove or replace circuit card assemblies within surveillance radars, other than radar data correlators (RDCs)	69
F162	Perform CAMS inquiries for uncompleted maintenance event listings	68
G181	Interpret block or schematic diagrams of surveillance radar functional groups	68
F160	Perform CAMS inquiries for scheduled surveillance radar or interrogator discrepancies	68
G213	Troubleshoot wiring or coaxial cables	68
G179	Inspect card slots	68
L418	Interpret on-line RCMP display messages	66
L428	Operate magnetic tape transport (MTT) radar programs, including surveillance or airborne operations	66
G190	Program or burn PROMS	66

46

TABLE 23

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 2A134 AND DAFSC 2A154 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 2A134 (N=41)	DAFSC 2A154 (N=65)	DIFFERENCE
O589	Perform power-off entry or exit procedures in antenna pedestals	88	60	+28
Q682	Wash aircraft	71	45	+26
G210	Safety wire surveillance radars or interrogator equipment	85	60	+25
M473	Connect or disconnect SF-6 ground service carts	80	58	+22
Q675	Inspect ramp areas for foreign object damage (FOD) matter	83	62	+21
G179	Inspect card slots	88	68	+20
O597	Remove or replace beam steering drivers	71	51	+20
L451	Remove or replace acoustical enclosures	71	51	+20
C77	Write EPRs	2	49	-47
B30	Counsel personnel on personal or military-related problems	5	51	-46
A17	Establish work priorities	0	43	-43
C73	Perform performance feedback (PFW) sessions	5	45	-40
B48	Supervise Airborne Warning and Control Radar Specialists (AFSC 45554)	2	40	-38
A20	Plan or schedule work assignments	0	34	-34
D86	Conduct OJT	22	55	-33
E111	Certify status of reparable, serviceable, or condemned parts	10	43	-33
E125	Initiate technical order forms, such as AFTO Forms 22 or AFTO Forms 110 (Technical Order/CPIN Distribution Record)	20	52	-32
A14	Establish performance standards for subordinates	2	32	-30
B28	Conduct supervisory orientations of newly assigned personnel	2	32	-30
B29	Coordinate equipment maintenance with appropriate agencies	2	32	-30
D108	Score tests	2	31	-28
B44	Interpret policies, directives, or procedures for subordinates	2	31	-28
F156	Defer surveillance radar or interrogator maintenance discrepancies in CAMS	32	60	-28
B37	Direct shop maintenance activities	0	28	-28
D89	Conduct upgrade training	10	37	-27
D90	Counsel trainees on training programs	2	29	-27
F154	Conduct CAMS training	12	38	-26

47

TABLE 24

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2A174 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=40)
F146	Access core automated maintenance system (CAMS) menus and data screens	65
A17	Establish work priorities	65
F159	Open or close CAMS	60
C77	Write EPRs	60
B27	Conduct or participate in staff meetings	58
C59	Conduct self-inspections	58
A20	Plan or schedule work assignments	55
B44	Interpret policies, directives, or procedures for subordinates	55
B30	Counsel personnel on personal or military-related problems	55
B48	Supervise Airborne Warning and Control Radar Specialists (AFSC 45554)	53
E120	Escort visitors through facilities	53
E113	Complete miscellaneous supply forms, such as AF Forms 2005 (Issue/Turn-in Request)	53
A10	Develop self-inspection programs	50
E124	Identify or evaluate equipment or software problems	50
D101	Evaluate progress of trainees	50
C68	Evaluate suggestions	50
C73	Perform performance feedback (PFW) sessions	50
D86	Conduct OJT	50
A14	Establish performance standards for subordinates	50

TABLE 25

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 2A154 AND DAFSC 2A174 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 2A154 (N=65)	DAFSC 2A174 (N=40)	DIFFERENCE
G174	Clean surveillance radar or interrogator equipment	63	10	+53
G172	Clean facilities	71	25	+46
M487	Perform leak repairs of SF-6 systems	62	18	+44
M501	Remove or replace HV auxiliaries	66	23	+44
M485	Perform leak isolation tests of SF-6 systems	60	18	+43
G205	Remove or replace system wiring, coaxial cables, or triaxial cables	63	23	+41
G178	Identify test equipment malfunctions	55	15	+40
F153	Clear or close-out completed surveillance radar or interrogator maintenance discrepancies in CAMS	75	35	+40
M483	Perform leak detection tests of SF-6 systems	60	20	+40
M532	Remove or replace TACs	65	25	+40
M511	Remove or replace KPA floating deck pulsers	65	25	+40
M535	Service 40- or 103-pound SF-6 gas bottles	62	23	+39
F155	Create surveillance radar or interrogator or support equipment maintenance discrepancies in CAMS	74	35	+39
G184	Perform corrosion control on surveillance radars or interrogator equipment	51	13	+38
G187	Perform time compliance technical order (TCTO) modification on surveillance radars or interrogator equipment	51	13	+38
C59	Conduct self-inspections	20	58	-38
C67	Evaluate safety or security programs	3	40	-37
A10	Develop self-inspection programs	15	50	-35
B27	Conduct or participate in staff meetings	23	58	-34
B41	Implement self-inspection programs	12	43	-30
C68	Evaluate suggestions	20	50	-30
D93	Determine OJT requirements	15	45	-30
B40	Implement safety or security programs	11	40	-29
C65	Evaluate maintenance or use of workspace, equipment, or supplies	14	43	-29
B49	Supervise Airborne Warning and Control Radar Technicians (AFSC 45574)	19	45	-27
D109	Write test questions	9	35	-26
B31	Direct development or maintenance of status boards, graphs, or charts	17	43	-26
E127	Maintain administrative files	17	43	-26
B38	Draft recommendations for changes in equipment or software	20	45	-25

49

AFMAN 36-2108 Specialty Descriptions Analysis

Survey data were compared to the AFMAN 36-2108 Specialty Descriptions for Airborne Warning and Control Radar Specialists and Technicians, dated 15 March 1991, effective 30 April 1991. The descriptions for the 3-, 5-, and 7-skill levels were generally accurate, depicting the technical aspects of each group, as well as the general increase in supervisory responsibilities previously described in the DAFSC analysis. The descriptions also capture the primary responsibilities of AFSC 2A1X4 members in the applicable clusters and jobs identified by the job structure analysis process.

Training Analysis

As previously noted, occupational survey data are sources of information which can be used to assist in the development of relevant training programs for entry-level personnel. Factors used to evaluate entry-level AFSC 2A1X4 were identical to those used for the AFSC 1A5X3 Training Analysis review. These include jobs being performed by first-enlistment personnel across career ladder jobs, percent first-job (1-24 months' TAFMS) and first-enlistment (1-48 months' TAFMS) members performing specific tasks, ratings of how much training emphasis tasks should receive in formal training, and relative TD ratings.

First-Enlistment Personnel Analysis

In this study, there are 44 AFSC 2A1X4 members in their first enlistment (1-48 months' TAFMS), representing 30 percent of all surveyed AFSC 2A1X4 personnel. Table 26 shows first-enlistment personnel spend approximately 55 percent of their time performing technical tasks, to include mission crew and lower compartment equipment maintenance and general radar maintenance. Table 27 displays representative tasks performed by first-enlistment AFSC 2A1X4 personnel.

TE and TD Data

TE and TD data can be, as stated earlier, very useful instruments for training development personnel as they decide which tasks to emphasize for entry-level training.

Tasks having the highest TE ratings for AFSC 2A1X4 personnel are listed in Table 28. Included for each task are the percentage of first-job and first-enlistment personnel performing and the TD rating. Tasks with the highest AFSC 2A1X4 TE ratings deal with fault isolation of radar equipment, primarily those done manually. Other emphasized tasks include interpreting

50

TABLE 26

AVERAGE PERCENT TIME SPENT ON DUTIES BY FIRST-ENLISTMENT
AFSC 2A1X4 PERSONNEL

DUTIES		AVERAGE TIME SPENT
A	ORGANIZING AND PLANNING	*
B	DIRECTING AND IMPLEMENTING	*
C	INSPECTING AND EVALUATING	*
D	TRAINING	*
E	PERFORMING ADMINISTRATIVE AND SUPPLY FUNCTIONS	4
F	PERFORMING CORE AUTOMATED AND MAINTENANCE SYSTEM (CAMS) ACTIVITIES	8
G	PERFORMING GENERAL RADAR MAINTENANCE	14
H	PERFORMING AIRBORNE RADAR TECHNICIAN (ART) IN-FLIGHT CREW DUTIES	1
I	PERFORMING COMMON AIRCREW DUTIES	*
J	MAINTAINING PECULIAR TEST EQUIPMENT	3
K	PERFORMING LOWER COMPARTMENT AND MISSION COMPARTMENT HOT-MOCKUP FUNCTIONS	6
L	MAINTAINING MISSION CREW COMPARTMENT EQUIPMENT (IN-FLIGHT AND GROUND)	26
M	MAINTAINING LOWER COMPARTMENT EQUIPMENT (IN-FLIGHT AND GROUND)	15
N	MAINTAINING INTERROGATION IDENTIFICATION FRIEND OR FOE (IFF) EQUIPMENT (IN-FLIGHT AND GROUND)	10
O	MAINTAINING ANTENNA PEDESTAL EQUIPMENT	5
P	PERFORMING MOBILITY TASKS	2
Q	PERFORMING CREW CHIEF CROSS-UTILIZATION TRAINING (CUT) TASKS	6

* Denotes less than 1 percent

51

TABLE 27

REPRESENTATIVE TASKS PERFORMED BY
FIRST-ENLISTMENT AFSC 2A1X4 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=44)
F159	Open or close CAMS	93
G172	Clean facilities	91
G179	Inspect card slots	89
G183	Operate powered aerospace ground equipment (AGE), such as power units or liquid cooling system (LCS) carts	86
G212	Trace signals through circuits using schematics or wiring diagrams	86
Q675	Inspect ramp areas for foreign object damage (FOD) matter	84
G210	Safety wire surveillance radars or interrogator equipment	84
F146	Access core automated maintenance system (CAMS) menus and data screens	82
O589	Perform power-off entry or exit procedures in antenna pedestals	82
G181	Interpret block or schematic diagrams of surveillance radar functional groups	82
G204	Remove or replace system PROMs	80
L417	Install or remove SDU-34/E air alarm systems	77
F153	Clear or closeout completed surveillance radar or interrogator maintenance discrepancies in CAMS	77
L425	Monitor LCSs meters and gauges	77
G213	Troubleshoot wiring or coaxial cables	77
L422	Mask continuously monitored parameters (CMPs)	77
M523	Remove or replace SF-6 bottles	77
L454	Remove or replace circuit card assemblies within RDCs	77
G190	Program or born PROMS	77
F160	Perform CAMS inquiries for scheduled surveillance radar or interrogator discrepancies	75
M473	Connect or disconnect SF-6 ground service carts	75
F155	Create surveillance radar or interrogator or support equipment maintenance discrepancies in CAMS	75
L426	Monitor locations displayed on RCMPs	75
L467	Replace dehydrator desiccant crystals	75
Q679	Place or remove aircraft wheel chocks	75
L415	Inhibit or enable automatic test sequences on surveillance radars	75
L424	Monitor automatic reconfigurations of surveillance radars	75
L423	Monitor antenna pedestal equipment cooling systems	75
L407	Fault isolate RDCs using BIT/FITs	75

52

TABLE 28

AFSC 2A1X4 TASKS WITH HIGHEST TRAINING EMPHASIS RATINGS

TASKS		TNG EMP	PERCENT MEMBERS PERFORMING 1ST JOB	1ST ENL	TSK DIF
L413	Fault isolate transmitters manually	6.92	60	68	6.30
L406	Fault isolate RDCs manually	6.69	60	70	7.07
G181	Interpret block or schematic diagrams of surveillance radar functional groups	6.62	80	82	5.59
G212	Trace signals through circuits using schematics or wiring diagrams	6.46	84	85	6.00
L407	Fault isolate RDCs using BIT/FITs	6.46	68	75	6.41
L414	Fault isolate transmitters using BIT/FITs	6.46	60	68	6.03
M477	Fault isolate HV systems manually	6.38	56	64	6.78
L392	Fault isolate analog receivers manually	6.38	56	64	5.89
L394	Fault isolate antenna pedestal equipment manually	6.38	68	70	6.06
L431	Perform cathode voltage harmonizations	6.31	56	66	5.84
L409	Fault isolate STALOs manually	6.31	60	66	6.13
L432	Perform collector current harmonizations	6.31	56	66	5.96
L411	Fault isolate synchronizers manually	6.23	64	68	6.35
L390	Analyze manual test results on surveillance radars	6.23	60	66	5.75
L445	Perform transmitter harmonizations	6.23	60	66	6.12
L446	Perform transmitter manual adjustments, other than harmonizations	6.23	56	66	6.15
L399	Fault isolate DDPs manually	6.15	48	61	6.63
L442	Perform solenoid current harmonizations	6.15	56	64	5.89
L443	Perform solenoid current manual adjustments	6.08	56	64	6.12
L389	Analyze automatic test results on surveillance radars	6.08	60	64	5.75
L437	Perform manual fault analyses of RDCs using processor memory control units (PMCUs) and diagnostic programs	6.08	60	70	7.37
L404	Fault isolate RCMPs manually	6.00	48	61	5.63
L410	Fault isolate surveillance radar systems using BIT/FITs	6.00	68	70	5.82
L393	Fault isolate analog receivers using built-in test/fault isolation tests (BIT/FITs)	6.00	64	68	5.78
L408	Fault isolate stable local oscillators (STALOs) using BIT/FITs	5.92	68	70	5.92
L430	Perform average power meter calibrations	5.92	68	73	6.35
L391	Configure surveillance radar subassemblies manually	5.92	56	66	5.44
F153	Clear or closeout completed surveillance radar or interrogator maintenance discrepancies in CAMS	5.85	68	77	4.76
G213	Troubleshoot wiring or coaxial cables	5.85	76	77	6.03

TE MEAN = 2.08; S.D. = 1.83 (HIGH = 3.91)
TD MEAN = 5.00; S.D. = 1.00

schematic diagrams of surveillance radar functional groups and performing component harmonization. These tasks are performed by relatively high percentages of first-job and first-enlistment AFSC 2A1X4 airmen.

Table 29 lists the tasks having the highest TD ratings. The percentages of first-enlistment, first-job, 5- , and 7-skill level personnel performing, and TE ratings are also included for each task. Most tasks with high TD ratings are technical functions dealing with manual fault isolation and analyses of radar equipment. Unlike the AFSC 1A5X3 data, the majority of tasks with high TD ratings have high TE ratings and are performed by relatively high percentages of AFSC 2A1X4 first-job and first-enlistment survey respondents.

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

Job Satisfaction Analysis

Job satisfaction responses for AFSC 2A1X4 members were analyzed and provide the following comparisons: (1) among TAFMS groups of the AFSC 2A1X4 career ladder and a comparative sample of other mission equipment maintenance specialists surveyed in 1992, and (2) between current and previous AFSC 2A1X4 TAFMS groups.

Table 30 provides a comparison of TAFMS group data of AFSC 2A1X4 personnel to a comparative sample of other mission equipment maintenance AFSCs surveyed the previous calendar year. These data give a relative measure of how AFSC 2A1X4 personnel job satisfaction responses compare with similar Air Force specialties. Overall, AFSC 2A1X4 responses are very similar to the mission equipment maintenance comparative data. Job satisfaction figures for all reported AFSC 2A1X4 TAFMS groups are relatively high.

An indication of changes in job satisfaction perceptions within the career ladder is provided in Table 31, which presents TAFMS group data for current survey respondents and data from respondents to the last OSR of the AFSC 2A1X4 career ladder in 1984 (then AFSC 328X2). Note that perceived use of talents and training data for this table are presented in a condensed format because "Excellent to Perfect" response choices were not offered in the 1984 survey. Generally, AFSC 2A1X4 respondents indicated higher job satisfaction ratings across all TAFMS groups than the 1984 sample, particularly first- and second-enlistment enlistment personnel. Additionally, all TAFMS groups reported higher perceived use of training ratings than 1984 respondents. The percentages of positive job satisfaction responses reflect a career ladder where personnel appear to be quite satisfied with their jobs.

54

TABLE 29

SAMPLE OF DAFSC 2A1X4 TASKS WITH HIGHEST TASK DIFFICULTY RATINGS

TASKS		TSK DIFF	PERCENT MEMBERS PERFORMING				TNG EMP
			1ST JOB	1ST ENL	DAFSC 1A553	DAFSC 1A573	
L437	Perform manual fault analyses of RDCs using processor memory control units (PMCUs) and diagnostic programs	7.37	60	70	62	30	6.08
O621	Remove or replace rotary joints	7.15	28	39	48	18	3.54
L406	Fault isolate RDCs manually	7.07	60	70	58	33	6.69
D95	Develop advanced radar maintenance training set (ARMTS) software	6.98	0	0	0	15	0.77
L436	Perform manual fault analyses of DDPs using multiplex data displays (MDDs) and diagnostic tapes	6.97	36	50	46	30	5.77
A11	Establish budget or financial requirements	6.96	0	2	6	18	0.00
M472	Calibrate noise source diodes manually	6.91	20	30	32	18	3.46
M477	Fault isolate HV systems manually	6.78	56	64	48	35	6.38
D96	Develop new equipment training programs	6.78	0	0	2	15	0.00
L435	Perform malfunction analysis using harmonization programs	6.78	48	59	57	30	5.77
K377	Repair electronic waveguide switches	6.70	8	7	11	0	1.85
O611	Remove or replace noise source diodes	6.70	20	30	32	15	2.23
N578	Repair IFF RT ISLS switches	6.69	24	27	20	8	0.77
L399	Fault isolate DDPs manually	6.63	48	61	54	35	6.15
O612	Remove or replace orthomode junctions	6.61	24	25	23	13	1.92
D97	Develop resident course or career development course (CDC) curriculum materials	6.58	0	2	2	8	0.77
G208	Repair card slots	6.56	24	41	46	20	3.69
O600	Remove or replace brush block assemblies	6.55	32	45	48	18	2.92
L434	Perform klystron power amplifier (KPA) burn-ins	6.54	48	59	57	28	5.62
B32	Direct flightline maintenance activities	6.54	0	5	25	35	0.46
C64	Evaluate individuals for promotion, demotion, or reclassification	6.53	0	2	17	35	0.00
O594	Remove or replace antenna waveguide switches	6.52	24	32	45	13	2.77
L427	Monitor system signal processing using FFTs or spectrum analyzers	6.51	56	61	52	28	5.00
O622	Remove or replace septum polarizers	6.51	12	18	22	13	1.85
A21	Prepare unit deployment or mobility plans	6.50	0	2	6	8	0.38
J336	Repair PMCUs	6.49	28	25	26	5	1.31
J334	Repair FFT test sets	6.49	20	20	25	8	1.23
N577	Repair IFF receivers	6.48	16	20	17	8	0.77
M531	Remove or replace strut waveguides	6.47	28	34	32	18	2.23
N582	Repair IFF video processors	6.46	24	25	20	8	0.77

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = 2.08; S.D. = 1.83 (HIGH = 3.91)

TABLE 30

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 2A1X4 TAFMS GROUPS IN CURRENT SURVEY TO A COMPARATIVE SAMPLE
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	AFSC 2A1X4 (N=44)	COMP SAMPLE (N=3,272)	AFSC 2A1X4 (N=22)	COMP SAMPLE (N=2,917)	AFSC 2A1X4 (N=80)	COMP SAMPLE (N=6,421)
EXPRESSED JOB INTEREST						
INTERESTING	82	74	73	72	75	75
SO-SO	11	16	18	17	12	16
DULL	5	10	9	11	13	9
DID NOT RESPOND	2	0	0	0	0	0
PERCEIVED USE OF TALENTS						
EXCELLENT TO PERFECT	14	17	0	21	19	24
FAIRLY WELL TO VERY WELL	66	58	86	50	67	51
NONE TO VERY LITTLE	20	20	14	20	14	18
DID NOT RESPOND	0	5	0	9	0	7
PERCEIVED USE OF TRAINING						
EXCELLENT TO PERFECT	16	17	0	15	17	16
FAIRLY WELL TO VERY WELL	68	68	86	66	60	63
NONE TO VERY LITTLE	16	14	14	19	21	21
DID NOT RESPOND	0	1	0	0	2	0
SENSE OF ACCOMPLISHMENT FROM JOB						
SATISFIED	75	73	64	71	71	72
NEUTRAL	9	12	9	11	11	10
DISSATISFIED	16	14	27	17	18	17
DID NOT RESPOND	0	1	0	1	0	1
REENLISTMENT INTENTIONS						
YES OR PROBABLY YES	59	58	59	70	74	75
NO OR PROBABLY NO	41	41	36	30	7	7
WILL RETIRE	0	0	0	0	19	18
DID NOT RESPOND	0	1	5	0	0	0

NOTE: Comparative sample is comprised of similar mission equipment maintenance AFSCs

56

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 2A1X4 TAFMS GROUPS IN CURRENT SURVEY TO 1984 AFSC 328X2 SURVEY
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	1993 (N=44)	1984 (N=113)	1993 (N=22)	1984 (N=37)	1993 (N=80)	1984 (N=19)
EXPRESSED JOB INTEREST						
INTERESTING	82	66	73	65	75	74
SO-SO	11	18	18	27	12	11
DULL	5	14	9	8	13	11
DID NOT RESPOND	2	2	0	0	0	4
PERCEIVED USE OF TALENTS						
FAIRLY WELL TO PERFECT	80	67	86	73	86	89
NONE TO VERY LITTLE	20	33	14	27	14	11
PERCEIVED USE OF TRAINING						
FAIRLY WELL TO PERFECT	84	74	86	68	79	68
NONE TO VERY LITTLE	16	26	14	32	21	32
SENSE OF JOB ACCOMPLISHMENT						
SATISFIED	75	#	64	#	71	#
NEUTRAL	9	#	9	#	11	#
DISSATISFIED	16	#	27	#	18	#
REENLISTMENT INTENTIONS						
YES OR PROBABLY YES	59	50	59	57	74	68
NO OR PROBABLY NO	41	49	36	22	7	11
WILL RETIRE	0	1	0	16	19	16
DID NOT RESPOND	0	0	5	5	0	5

# Denotes choice not offered in previous study

IMPLICATIONS

As explained in the **INTRODUCTION**, this survey was conducted primarily to ensure a current data base for both the Airborne Radar Systems (AFSC 1A5X3) and Airborne Warning and Control Radar (AFSC 2A1X4) career ladders. Data compiled from this survey support the current structure of both career ladders. Specialty Job Analysis indicates a clear delineation between the surveyed AFSCs, with little overlap or cross-utilization across identified jobs and clusters. Furthermore, AFMAN 36-2108 Specialty Descriptions for both career ladders accurately portray the clusters and jobs identified in this study.

For the most part, members of both career ladders appear relatively satisfied with their jobs. However, AFSC 1A5X3 first-enlistment airmen and members of the Back Shop Maintenance job indicated comparatively lower job satisfaction ratings. Career ladder managers may want to review these areas to determine possible causes and corrections.

APPENDIX A

REPRESENTATIVE TASKS PERFORMED BY
MEMBERS OF CAREER LADDER JOBS

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE A1

IN-FLIGHT MAINTENANCE JOB
(STG31)

TASKS		PERCENT MEMBERS PERFORMING (N=84)
I316	Study technical orders for abnormal and emergency in-flight procedures	100
H239	Decode octal, binary, or decimal readouts	100
H234	Coordinate surveillance radar power-ups with MCCs	100
I318	Visually check to ensure passengers are secure and in position prior to takeoffs, landings, or air refuelings	100
I281	Notify FEs when rear doors closed, escape slides engaged, and emergency lights armed prior to engine starts	100
I280	Notify FEs when emergency lights off and emergency escape slides stowed after engine shutdowns	100
H244	Notify MCCs and ASOs when IFF is operational	100
H246	Notify MCCs when cooling lights are out	100
H215	Analyze equipment for best mission configurations	99
H257	Perform preflight checks of LCSs, power feeder duct cooling systems, and antenna cooling control panels	99
I311	Secure equipment for descents or landings	99
H258	Perform preflight inspections of IFF units	99
H222	Coordinate IFF or surveillance radar equipment status in-flight with MCCs or ASOs	99
H262	Transfer surveillance radar controls	99
H233	Coordinate surveillance radar equipment malfunctions with MCCs	99
I274	File airborne radar technician (ART) in-flight logs in aircraft history books	99
I270	Connect or disconnect emergency escape slides	99
H250	Notify MCCs when surveillance radars are off	99
H249	Notify MCCs when surveillance radars and IFFs are in standby for air refuelings	99
I305	Prepare or maintain airborne radar technician (ART) in-flight log forms	98
I299	Perform walkaround inspections after takeoffs	98
H214	Advise maintenance personnel in identifying aircraft systems malfunctions	98

TABLE A2

ON/OFF EQUIPMENT MAINTENANCE CLUSTER
(STG27)

TASKS		PERCENT MEMBERS PERFORMING (N=85)
L418	Interpret on-line RCMP display messages	98
L426	Monitor locations displayed on RCMPs	96
G212	Trace signals through circuits using schematics or wiring diagrams	96
L415	Inhibit or enable automatic test sequences on surveillance radars	96
M523	Remove or replace SF-6 bottles	95
L417	Install or remove SDU-34/E air alarm systems	95
G183	Operate powered aerospace ground equipment (AGE), such as power units or liquid cooling system (LCS) carts	95
L407	Fault isolate RDCs using BIT/FITs	95
L416	Inhibit or enable individual tests on surveillance radars	94
L425	Monitor LCSs meters and gauges	94
L423	Monitor antenna pedestal equipment cooling systems	94
L422	Mask continuously monitored parameters (CMPs)	94
L440	Perform radar turn-on or turn-off procedures under RCMP control	93
M473	Connect or disconnect SF-6 ground service carts	93
L428	Operate magnetic tape transport (MTT) radar programs, including surveillance or airborne operations	93
F159	Open or close CAMS	93
O589	Perform power-off entry or exit procedures in antenna pedestals	93
L424	Monitor automatic reconfigurations of surveillance radars	93
Q668	Apply external AC and DC power to aircraft	92
G181	Interpret block or schematic diagrams of surveillance radar functional groups	92
L450	Recycle radar programs	92
G195	Remove or replace circuit card assemblies within surveillance radars, other than radar data correlators (RDCs)	92
L414	Fault isolate transmitters using BIT/FITs	92
L408	Fault isolate stable local oscillators (STALOs) using BIT/FITs	92
G190	Program or burn PROMS	92

TABLE A3

BACK SHOP MAINTENANCE JOB
(STG38)

TASKS		PERCENT MEMBERS PERFORMING (N=12)
F159	Open or close CAMS	100
J336	Repair PMCUs	100
J334	Repair FFT test sets	100
J320	Adjust or align fast fourier transform (FFT) test sets	100
J325	Bench check FFT test sets	100
J321	Bench check APM-401 radar test sets	100
J322	Bench check APM-402 radar test sets	100
J329	Calibrate APM-401 radar test sets	100
J333	Repair APM-402 radar test sets	100
J330	Calibrate APM-402 radar test sets	100
J332	Repair APM-401 radar test sets	100
G172	Clean facilities	92
N542	Bench check IFF receiver-transmitter (RT) units	92
E126	Inventory equipment, software, tools, or supplies	92
N547	Bench check IFF transmitters	92
N548	Bench check IFF video processors	92
N545	Bench check IFF RT interrogation side-lobe suppression (ISLS) switches	92
G176	Fabricate coaxial or triaxial cables	92
G177	Fabricate multiconductor cables	92
F155	Create surveillance radar or interrogator or support equipment maintenance discrepancies in CAMS	92
J327	Bench check processor memory control units (PMCUs)	92

TABLE A4

TECHNICAL TRAINING SCHOOL JOB
(STG32)

TASKS		PERCENT MEMBERS PERFORMING (N=5)
D87	Conduct resident course classroom training	100
D106	Prepare lesson plans	100
D108	Score tests	100
D109	Write test questions	100
N542	Bench check IFF receiver-transmitter (RT) units	100
D79	Administer tests, other than for aircrew member training	80
D94	Determine resident course training requirements	80
N548	Bench check IFF video processors	80
N547	Bench check IFF transmitters	80
G181	Interpret block or schematic diagrams of surveillance radar functional groups	60
G212	Trace signals through circuits using schematics or wiring diagrams	60
D107	Procure training aids, space, or equipment	60
D104	Maintain training records, charts, or graphs	60
E127	Maintain administrative files	60
F159	Open or close CAMS	60
F146	Access core automated maintenance system (CAMS) menus and data screens	60
F154	Conduct CAMS training	60
N543	Bench check IFF receivers	60
N545	Bench check IFF RT interrogation side-lobe suppression (ISLS) switches	60

TABLE A5

FIELD TRAINING DETACHMENT JOB
(STG20)

TASKS		PERCENT MEMBERS PERFORMING (N=5)
L450	Recycle radar programs	100
L428	Operate magnetic tape transport (MTT) radar programs, including surveillance or airborne operations	100
L422	Mask continuously monitored parameters (CMPs)	100
D106	Prepare lesson plans	100
L425	Monitor LCSs meters and gauges	100
G212	Trace signals through circuits using schematics or wiring diagrams	80
L426	Monitor locations displayed on RCMPs	80
D101	Evaluate progress of trainees	80
N549	Interpret IFF maintenance advisory messages from on-board test monitor and maintenance (OBTM&M)	80
N553	Perform manual trouble analyses of IFF antenna equipment RF faults	80
N554	Perform manual trouble analyses of IFF antenna equipment steering error faults	80
N550	Monitor RTDP status indicator lights	80
G213	Troubleshoot wiring or coaxial cables	80
N552	Perform IFF rack turn-on or turn-off procedures	80
L391	Configure surveillance radar subassemblies manually	80
L389	Analyze automatic test results on surveillance radars	80
L390	Analyze manual test results on surveillance radars	80
N537	Bench check IFF antenna drives	80
N536	Bench check IFF antenna controls	80
N544	Bench check IFF RF detectors	80
N546	Bench check IFF three-way power dividers	80
N538	Bench check IFF eight-way power dividers	80
L423	Monitor antenna pedestal equipment cooling systems	80
L424	Monitor automatic reconfigurations of surveillance radars	80
D79	Administer tests, other than for aircrew member training	80
L410	Fault isolate surveillance radar systems using BIT/FITs	80
L449	Recycle power on digital racks	80
D108	Score tests	80
D98	Develop training aids	80
D109	Write test questions	80
L439	Perform radar emergency shutdowns	80

TABLE A6

MANAGEMENT CLUSTER
(STG24)

TASKS		PERCENT MEMBERS PERFORMING (N=12)
B52	Supervise personnel in career ladders other than AFSCs 118X2 or 455X4	100
B44	Interpret policies, directives, or procedures for subordinates	100
B30	Counsel personnel on personal or military-related problems	100
C73	Perform performance feedback (PFW) sessions	100
C77	Write EPRs	100
B27	Conduct or participate in staff meetings	92
A14	Establish performance standards for subordinates	92
A17	Establish work priorities	92
A13	Establish organizational policies, office instructions (OIs), or standing operating procedures (SOPs)	83
C65	Evaluate maintenance or use of workspace, equipment, or supplies	83
E124	Identify or evaluate equipment or software problems	83
E125	Initiate technical order forms, such as AFTO Forms 22 or AFTO Forms 110 (Technical Order/CPIN Distribution Record)	83
A20	Plan or schedule work assignments	83
B28	Conduct supervisory orientations of newly assigned personnel	83
C68	Evaluate suggestions	83
D93	Determine OJT requirements	83
E120	Escort visitors through facilities	83
E145	Review publications, correspondence, or reports	75
C70	Evaluate work schedules	75
B38	Draft recommendations for changes in equipment or software	75
D104	Maintain training records, charts, or graphs	75
D86	Conduct OJT	75
A10	Develop self-inspection programs	75
D101	Evaluate progress of trainees	75
D90	Counsel trainees on training programs	75
C59	Conduct self-inspections	75
A23	Schedule personnel for leaves, passes, or temporary duty (TDY)	75
C64	Evaluate individuals for promotion, demotion, or reclassification	75

APPENDIX B

EXPANDED LISTING OF TASK MODULES AND TASK STATEMENTS

THIS PAGE INTENTIONALLY LEFT BLANK

These Task Modules (TMs) were developed in order to organize and summarize the extensive task information of this specialty. The TMs were developed by clustering tasks which are coperformed by the same incumbents. Coperformance is a measure of how probable a task will be performed with another task, based upon the responses of surveyed personnel. For example, if an individual performs one CAMS task, the probability is very high that he or she will perform other CAMS tasks. Thus, the group of CAMS tasks can be considered a "natural group" of associated or related tasks (see TM 0012 below). The statistical clustering generally approximates these "natural groupings."

The title of each TM is a best estimate as to the generic subject content of the group of tasks. The TMs are useful for organizing the task data into meaningful units and as a way to concisely summarize the extensive job data. However, TMs are only one way to organize the information. Other strategies may also be valid.

0001   Mechanical mission crew compartment fault isolation

1	L389	Analyze automatic test results on surveillance radars
2	L390	Analyze manual test results on surveillance radars
3	L391	Configure surveillance radar subassemblies manually
4	L393	Fault isolate analog receivers using built-in test/fault isolation tests (BIT/FITs)
5	L395	Fault isolate antenna pedestal equipment using BIT/FITs
6	L397	Fault isolate data communications using BIT/FITs
7	L398	Fault isolate digital doppler processors (DDPs) using BIT/FITs
8	L405	Fault isolate RCMPs using BIT/FITs
9	L407	Fault isolate RDCs using BIT/FITs
10	L408	Fault isolate stable local oscillators (STALOs) using BIT/FITs
11	L410	Fault isolate surveillance radar systems using BIT/FITs
12	L412	Fault isolate synchronizers using BIT/FITs
13	L414	Fault isolate transmitters using BIT/FITs
14	L415	Inhibit or enable automatic test sequences on surveillance radars
15	L416	Inhibit or enable individual tests on surveillance radars
16	L418	Interpret on-line RCMP display messages
17	L420	Manually control surveillance radar parameters using keyboard actions
18	L422	Mask continuously monitored parameters (CMPs)
19	L423	Monitor antenna pedestal equipment cooling systems
20	L424	Monitor automatic reconfigurations of surveillance radars
21	L425	Monitor LCSs meters and gauges
22	L426	Monitor locations displayed on RCMPs
23	L427	Monitor system signal processing using FFTs or spectrum analyzers
24	L428	Operate magnetic tape transport (MTT) radar programs, including surveillance or airborne operations
25	L438	Perform radar capability assessments (RCAs) on surveillance radars
26	L440	Perform radar turn-on or turn-off procedures under RCMP control
27	L444	Perform surveillance radar forced program loads
28	L449	Recycle power on digital racks
29	L450	Recycle radar programs
30	N549	Interpret IFF maintenance advisory messages from on-board test monitor and maintenance (OBTM&M)

0001	Mechanical mission crew compartment fault isolation (Continued)	

31	N550	Monitor RTDP status indicator lights
32	N552	Perform IFF rack turn-on or turn-off procedures
33	N556	Perform operational IFF checkout procedures

0002	Manual mission crew compartment fault isolation	

1	L392	Fault isolate analog receivers manually
2	L394	Fault isolate antenna pedestal equipment manually
3	L396	Fault isolate data communications manually
4	L399	Fault isolate DDPs manually
5	L404	Fault isolate RCMPs manually
6	L406	Fault isolate RDCs manually
7	L409	Fault isolate STALOs manually
8	L411	Fault isolate synchronizers manually
9	L413	Fault isolate transmitters manually
10	L421	Manually control test targets across data processing systems interfaces

0003	IFF trouble analysis	

1	N553	Perform manual trouble analyses of IFF antenna equipment RF faults
2	N554	Perform manual trouble analyses of IFF antenna equipment steering error faults
3	N555	Perform manual trouble analyses of IFF E-17 cabinet equipment
4	N558	Perform trouble analyses by detecting faults at situation display consoles, such as strobing or multiple targeting
5	N562	Remove or replace IFF circuit card assemblies within RTDPs

0004	Mobility preparation	

1	P629	Accomplish mobility processing checklists
2	P636	Don or doff chemical warfare personal protective clothing
3	P642	Maintain immunization records
4	P644	Pack or unpack individual mobility equipment for deployments
5	P646	Participate in predeployment mobility briefings
6	P647	Perform aircraft cocking or uncocking procedures
7	P663	Prepare personal clothing and equipment for deployments

0005	General airborne radar systems/aircrew duties	

1	H214	Advise maintenance personnel in identifying aircraft systems malfunctions
2	H215	Analyze equipment for best mission configurations
3	H216	Brief mission crew commanders (MCCs) and air surveillance officers (ASOs) on surveillance radar or IFF equip status
4	H217	Call maintenance control for surveillance radar or identification friend or foe (IFF) equipment status
5	H219	Coordinate IFF configurations for shutdown with ASOs
6	H220	Coordinate IFF controls with ASOs

7	H221	Coordinate IFF equipment malfunctions with MCCs
8	H222	Coordinate IFF or surveillance radar equipment status in-flight with MCCs or ASOs
9	H223	Coordinate interface malfunction analyses with computer display maintenance technicians (CDMTs)
10	H224	Coordinate LCS configurations with flight engineers (FEs)
11	H225	Coordinate manual performance investigations with ASOs
12	H226	Coordinate operation of airborne operational computer programs (AOCPs) with CDMTs
13	H227	Coordinate optimum IFF configurations with ASOs
14	H228	Coordinate phone patches with MCCs or communications systems operators (CSOs)
15	H229	Coordinate radar operations times with MCCs
16	H230	Coordinate sensor settings with ASOs
17	H231	Coordinate software requirements with CDMTs
18	H232	Coordinate surveillance radar controls with ASOs
19	H233	Coordinate surveillance radar equipment malfunctions with MCCs
20	H234	Coordinate surveillance radar power-ups with MCCs
21	H235	Coordinate total effective station times with ASOs or CDMTs
22	H236	Coordinate with CDMTs on diagnostic maintenance programs (DMPs) for IFFs or surveillance radars
23	H237	Debrief maintenance personnel on software or equipment malfunctions
24	H238	Debrief operations personnel on software or equipment malfunctions
25	H239	Decode octal, binary, or decimal readouts
26	H240	Establish priorities for restoring equipment to operations status
27	H241	Interpret SDC displays
28	H242	Monitor radio communications transmissions
29	H243	Monitor SF-6 systems for leaks
30	H244	Notify MCCs and ASOs when IFF is operational
31	H245	Notify MCCs of visual warning display units status
32	H246	Notify MCCs when cooling lights are out
33	H247	Notify MCCs when IFFs are off
34	H248	Notify MCCs when LCSs are off
35	H249	Notify MCCs when surveillance radars and IFFs are in standby for air refuelings
36	H250	Notify MCCs when surveillance radars are off
37	H252	Participate in crew maintenance debriefings
38	H253	Perform air refueling procedures
39	H254	Perform EGW quantity check procedures
40	H257	Perform preflight checks of LCSs, power feeder duct cooling systems, and antenna cooling control panels
41	H258	Perform preflight inspections of IFF units
42	H260	Review technical orders for in-flight procedures
43	H261	Set RDC sense switches in mission configurations
44	H262	Transfer surveillance radar controls
45	H263	Turn surveillance radars to standby using keyboard actions
46	H264	Visually inspect conditions of equipment racks, other than during phase inspections
47	H265	Visually inspect conditions of rotodome exteriors, other than during phase inspections
48	H266	Visually inspect liquid cooling systems, other than during phase inspections
49	H267	Visually inspect panels, locks, or fasteners, other than during phase inspections

50	H268	Visually inspect SF-6 systems, other than during phase inspections
51	H269	Visually inspect surveillance radar equipment in aft lower lobes, other than during phase inspections
52	I270	Connect or disconnect emergency escape slides
53	I271	Coordinate corrections of aircraft discrepancies or malfunctions with aircraft commanders
54	I272	Coordinate surveillance radar power ups with FEs
55	I274	File airborne radar technician (ART) in-flight logs in aircraft history books
56	I275	Inspect or prepare crew relief areas
57	I277	Load or unload crews' gear on or off aircraft
58	I278	Maintain current status of flight manuals, safety and operational supplements, and flight crew checklists
59	I279	Notify FEs of visual warning display unit malfunctions
60	I280	Notify FEs when emergency lights off and emergency escape slides stowed after engine shutdowns
61	I281	Notify FEs when rear doors closed, escape slides engaged, and emergency lights armed prior to engine starts
62	I282	Open or close crew entrance doors
63	I283	Operate emergency escape doors
64	I284	Operate emergency escape hatches
65	I285	Operate emergency lights
66	I286	Operate fire extinguishers
67	I287	Operate galley equipment, such as ovens or coffee makers
68	I290	Participate in crew operation debriefings
69	I291	Participate in general or specialized mission briefings, such as intelligence or weather briefings
70	I292	Participate in life support training seminars
71	I294	Perform high altitude procedures in altitude chamber
72	I295	Perform or practice emergency aircraft procedures
73	I296	Perform personal equipment inspections
74	I297	Perform preflight checks of emergency equipment
75	I298	Perform preflight inspections of personal life support equipment and oxygen equipment
76	I299	Perform walkaround inspections after takeoffs
77	I300	Pick up aircraft history books prior to flight
78	I304	Post changes to personal aircrew publications
79	I305	Prepare or maintain airborne radar technician (ART) in-flight log forms
80	I306	Review aircraft equipment history books
81	I307	Review and sign off flight crew information files (FCIFs)
82	I308	Review mission operations read files (MORFs)
83	I309	Review or annotate aircraft writeups on AFTO Forms 781-Series (Maintenance Discrepancy and Work Document)
84	I310	Review or annotate flight orders
85	I311	Secure equipment for descents or landings
86	I312	Secure rear doors of aircraft prior to engine starts
87	I313	Select maintenance brevity codes
88	I314	Select mission computer tapes
89	I315	Stow equipment and galley items in aft sections of aircraft

0005		General airborne radar systems/aircrew duties (Continued)
90	I316	Study technical orders for abnormal and emergency in-flight procedures
91	I317	Turn on or turn off power to galleys
92	I318	Visually check to ensure passengers are secure and in position prior to takeoffs, landings, or air refuelings
93	I319	Visually inspect spare life support equipment, other than during phase inspections

0006		Airborne radar systems qualification training
1	B46	Supervise Airborne Radar Systems Specialists (AFSC 11852)
2	B50	Supervise Apprentice Airborne Radar Systems Specialists (AFSC 11832)
3	D83	Conduct in-flight training
4	D84	Conduct initial qualification training
5	D85	Conduct mission qualification training
6	D92	Determine in-flight training requirements

0007		Supervision and manpower
1	A1	Assign personnel to duty positions
2	A14	Establish performance standards for subordinates
3	A17	Establish work priorities
4	A20	Plan or schedule work assignments
5	B28	Conduct supervisory orientations of newly assigned personnel
6	B30	Counsel personnel on personal or military-related problems
7	B44	Interpret policies, directives, or procedures for subordinates
8	B52	Supervise personnel in career ladders other than AFSCs 118X2 or 455X4
9	C56	Analyze workload requirements
10	C64	Evaluate individuals for promotion, demotion, or reclassification
11	C70	Evaluate work schedules
12	C71	Indorse enlisted performance reports (EPRs)
13	C73	Perform performance feedback (PFW) sessions
14	C74	Select individuals for specialized training
15	C77	Write EPRs
16	D81	Assign on-the-job training (OJT) trainers
17	D86	Conduct OJT
18	D89	Conduct upgrade training
19	D90	Counsel trainees on training programs
20	D93	Determine OJT requirements
21	D99	Direct training programs
22	D01	Evaluate progress of trainees
23	D102	Evaluate training methods or techniques
24	D103	Implement training programs
25	D104	Maintain training records, charts, or graphs
26	D105	Plan or schedule training, such as OJT or ancillary training

0008		Administration and evaluation
1	A4	Determine logistics require..nents, such as equipment, personnel, or space
2	A5	Determine publications requirements
3	A7	Develop inspection procedures
4	A9	Develop quality assurance programs
5	A10	Develop self-inspection programs
6	A13	Establish organizational policies, office instructions (OIs), or standing operating procedures (SOPs)
7	A16	Establish work methods, controls, or procedures
8	A19	Plan or prepare briefings
9	B26	Conduct briefings
10	B27	Conduct or participate in staff meetings
11	B29	Coordinate equipment maintenance with appropriate agencies
12	B35	Direct maintenance or utilization of equipment or software
13	B38	Draft recommendations for changes in equipment or software
14	B41	Implement self-inspection programs
15	C59	Conduct self-inspections
16	C68	Evaluate suggestions
17	C78	Write staff studies, surveys, or special reports, other than training reports
18	E120	Escort visitors through facilities
19	E121	Establish equipment or software requirements
20	E123	Examine historical data for recurring equipment problems
21	E124	Identify or evaluate equipment or software problems
22	E125	Initiate technical order forms, such as AFTO Forms 22 or AFTO Forms 110 (Technical Order/CPIN Distribution Record)
23	E127	Maintain administrative files
24	E145	Review publications, correspondence, or reports

0009		IFF bench check and repair
1	N540	Bench check IFF low voltage power supplies
2	N542	Bench check IFF receiver-transmitter (RT) units
3	N543	Bench check IFF receivers
4	N545	Bench check IFF RT interrogation side-lobe suppression (ISLS) switches
5	N547	Bench check IFF transmitters
6	N548	Bench check IFF video processors
7	N576	Repair IFF low-voltage power supplies
8	N578	Repair IFF RT ISLS switches
9	N579	Repair IFF RT units
10	N581	Repair IFF transmitters
11	N582	Repair IFF video processors

0010		Publications, files, and libraries administration
1	A6	Develop cost-reduction programs
2	A8	Develop organizational or functional charts
3	A15	Establish publication libraries

0010		Publications, files, and libraries administration (Continued)
4	A18	Plan layouts of facilities
5	A24	Write job descriptions
6	B34	Direct maintenance of technical order (TO) libraries
7	B40	Implement safety or security programs
8	B42	Implement suggestion programs
9	B47	Supervise Airborne Radar Systems Technicians (AFSC 11872)
10	C65	Evaluate maintenance or use of workspace, equipment, or supplies
11	C66	Evaluate procedures for storage, inventory, or inspection of property items
12	C67	Evaluate safety or security programs
13	C72	Investigate accidents or incidents
14	E114	Complete records of evaluation
15	E119	Document destruction of classified materials or documents
16	E128	Maintain Air Force publications files
17	E144	Research technical order indexes

0011		Formal training
1	D79	Administer tests, other than for aircrew member training
2	D87	Conduct resident course classroom training
3	D91	Determine formal aircraft training requirements
4	D94	Determine resident course training requirements
5	D97	Develop resident course or career development course (CDC) curriculum materials
6	D98	Develop training aids
7	D106	Prepare lesson plans
8	D107	Procure training aids, space, or equipment
9	D108	Score tests
10	D109	Write test questions

0012		CAMS and general radar maintenance
1	E113	Complete miscellaneous supply forms, such as AF Forms 2005 (Issue/Turn-in Request)
2	E115	Crate or uncrate parts for issue or turn-ins
3	E126	Inventory equipment, software, tools, or supplies
4	F146	Access core automated maintenance system (CAMS) menus and data screens
5	F147	Analyze CAMS data
6	F150	Change CAMS printer paper
7	F153	Clear or closeout completed surveillance radar or interrogator maintenance discrepancies in CAMS
8	F155	Create surveillance radar or interrogator or support equipment maintenance discrepancies in CAMS
9	F156	Defer surveillance radar or interrogator maintenance discrepancies in CAMS
10	F159	Open or close CAMS
11	F160	Perform CAMS inquiries for scheduled surveillance radar or interrogator discrepancies
12	F162	Perform CAMS inquiries for uncompleted maintenance event listings
13	F163	Perform CAMS inquiries to monitor delayed discrepancies prior to, during, or after scheduling maintenance

0012		CAMS and general radar maintenance (Continued)
14	F164	Perform CAMS interface with base supply systems, such as checking parts status or ordering maintenance assets
15	F166	Reschedule surveillance radar or interrogator maintenance discrepancies in CAMS
16	F167	Schedule surveillance radar or interrogator maintenance discrepancies in CAMS
17	G172	Clean facilities
18	G174	Clean surveillance radar or interrogator equipment
19	G178	Identify test equipment malfunctions
20	G179	Inspect card slots
21	G181	Interpret block or schematic diagrams of surveillance radar functional groups
22	G184	Perform corrosion control on surveillance radars or interrogator equipment
23	G185	Perform phase inspections
24	G195	Remove or replace circuit card assemblies within surveillance radars, other than radar data correlators (RDCs)
25	G196	Remove or replace common hardware, such as fuse holders, knobs, or faceplates
26	G210	Safety wire surveillance radars or interrogator equipment
27	G212	Trace signals through circuits using schematics or wiring diagrams
28	Q675	Inspect ramp areas for foreign object damage (FOD) matter

0013		Remove/replace equipment maintenance
1	G175	Connect or disconnect track assemblies or monorail trolleys
2	G182	Manually calibrate analog-to-digital offsets
3	G183	Operate powered aerospace ground equipment (AGE), such as power units or liquid cooling system (LCS) carts
4	G186	Perform radar calibrations
5	G187	Perform time compliance technical order (TCTO) modification on surveillance radars or interrogator equipment
6	G188	Perform transmitter ground radiations
7	G189	Perform wire wrap connections
8	G190	Program or burn PROMS
9	G191	Remove or reinstall aircraft access plates, panels, or flooring
10	G194	Remove or replace bulk power supplies
11	G199	Remove or replace filters and relay assemblies
12	G200	Remove or replace interlock switches
13	G201	Remove or replace inverters
14	G202	Remove or replace series regulators
15	G203	Remove or replace solder sleeves
16	G204	Remove or replace system PROMs
17	G205	Remove or replace system wiring, coaxial cables, or triaxial cables
18	G208	Repair card slots
19	G209	Safety bond or ground equipment
20	G211	Set up flightline maintenance stands
21	G213	Troubleshoot wiring or coaxial cables
22	L388	Adjust collector current data communications
23	L417	Install or remove SDU-34/E air alarm systems
24	L419	Manually calibrate BTGs

25	L430	Perform average power meter calibrations
26	L431	Perform cathode voltage harmonizations
27	L432	Perform collector current harmonizations
28	L434	Perform klystron power amplifier (KPA) burn-ins
29	L435	Perform malfunction analysis using harmonization programs
30	L436	Perform manual fault analyses of DDPs using multiplex data displays (MDDs) and diagnostic tapes
31	L437	Perform manual fault analyses of RDCs using processor memory control units (PMCUs) and diagnostic programs
32	L441	Perform reflected power monitor calibrations
33	L442	Perform solenoid current harmonizations
34	L443	Perform solenoid current manual adjustments
35	L445	Perform transmitter harmonizations
36	L446	Perform transmitter manual adjustments, other than harmonizations
37	L447	Perform transmitter peak power monitor calibrations
38	L451	Remove or replace acoustical enclosures
39	L452	Remove or replace capacitor boards
40	L453	Remove or replace circuit breakers
41	L455	Remove or replace cooling effectiveness monitors (CEMs)
42	L456	Remove or replace dehydrators
43	L457	Remove or replace display assemblies
44	L458	Remove or replace DLMBs
45	L459	Remove or replace MSC receiver assemblies
46	L460	Remove or replace power sequencers and dump circuit assemblies
47	L461	Remove or replace program memory core board modules
48	L462	Remove or replace RCMP keyboards
49	L463	Remove or replace RCMPs
50	L464	Remove or replace STALO subassemblies, other than acoustical enclosures
51	L465	Remove or replace switchlight assemblies
52	L466	Remove or replace waveguide dummy loads from surveillance radars
53	L467	Replace dehydrator desiccant crystals
54	M468	Adjust or align RF sample assemblies
55	M469	Adjust or align TAC gain compressions
56	M470	Adjust or align TAC thermal assemblies
57	M471	Calibrate ion pump power supplies manually
58	M472	Calibrate noise source diodes manually
59	M473	Connect or disconnect SF-6 ground service carts
60	M474	Depressurize HV transmitter units
61	M475	Drain liquid coolant systems
62	M476	Evacuate or pressurize SF-6 filled units
63	M477	Fault isolate HV systems manually
64	M478	Inspect alternating current (AC) relay assemblies
65	M479	Perform dynamic pressure output checks on SF-6 systems
66	M480	Perform dynamic system flow checks
67	M481	Perform KPA build-up procedures
68	M482	Perform leak detection tests of EGW systems

69	M483	Perform leak detection tests of SF-6 systems
70	M484	Perform leak isolation tests of EGW systems
71	M485	Perform leak isolation tests of SF-6 systems
72	M486	Perform leak repairs of EGW systems
73	M487	Perform leak repairs of SF-6 systems
74	M488	Perform SF-6 systems static pressure output or system pressure checks
75	M491	Prefill EGW components
76	M492	Pressurize or depressurize LCS nitrogen pressurized systems
77	M493	Remove or replace AC relay assemblies
78	M494	Remove or replace air diverter vanes
79	M495	Remove or replace arc detectors
80	M496	Remove or replace direct current (DC) relay assemblies
81	M497	Remove or replace drivers
82	M498	Remove or replace EMI filters
83	M499	Remove or replace ground deck pulsers
84	M500	Remove or replace high-power microwave assemblies
85	M501	Remove or replace HV auxiliaries
86	M502	Remove or replace HV cables
87	M503	Remove or replace HV filters
88	M504	Remove or replace HV power supplies
89	M505	Remove or replace HV regulators
90	M506	Remove or replace HV transformers
91	M507	Remove or replace inlet manifolds
92	M508	Remove or replace ion pump power supplies
93	M509	Remove or replace klystron cathode housings
94	M510	Remove or replace klystron solenoids
95	M511	Remove or replace KPA floating deck pulsers
96	M512	Remove or replace level set attenuators
97	M513	Remove or replace liquid-cooled manually actuated waveguide switches
98	M514	Remove or replace liquid-cooled waveguide high-power circulators
99	M515	Remove or replace liquid-cooled waveguide pressure windows
100	M516	Remove or replace low-voltage auxiliaries
101	M517	Remove or replace lower compartment circuit breakers
102	M518	Remove or replace overcurrent sensors
103	M519	Remove or replace predrivers
104	M520	Remove or replace protection and control subassemblies
105	M521	Remove or replace return manifolds
106	M522	Remove or replace RF sample assemblies
107	M523	Remove or replace SF-6 bottles
108	M524	Remove or replace SF-6 pressure relief valves
109	M525	Remove or replace SF-6 pressure switches
110	M526	Remove or replace SF-6 pressurization control boxes
111	M527	Remove or replace SF-6 vent valves
112	M528	Remove or replace solenoid power supplies
113	M529	Remove or replace standby AC contactors
114	M530	Remove or replace standby power distribution boxes

115	M531	Remove or replace strut waveguides	
116	M532	Remove or replace TACs	
117	M533	Remove or replace thermal assemblies	
118	M534	Service SF-6 ground service carts	
119	M535	Service 40- or 103-pound SF-6 gas bottles	
120	N557	Perform RTDP chassis continuity checks	
121	N559	Remove or replace IFF analog-to-digital converters	
122	N560	Remove or replace IFF antenna controls	
123	N561	Remove or replace IFF antenna drives	
124	N563	Remove or replace IFF power supply units (PSUs)	
125	N564	Remove or replace interrogator computers	
126	N565	Remove or replace multiplexers	
127	N566	Remove or replace radar RT assemblies	
128	N567	Remove or replace RF band pass filters	
129	N568	Remove or replace RF eight-way power dividers	
130	N569	Remove or replace RF power detectors	
131	N570	Remove or replace RF three-way power dividers	
132	N571	Remove or replace switches or indicators on RTDPs	
133	N572	Remove or replace transmission line switch assemblies	
134	N573	Remove or replace 3-dB fixed attenuators	
135	O585	Connect or disconnect FC-77 fill and bleed carts	
136	O586	Connect or disconnect FC-77 top-off bottles	
137	O587	Perform leak detection tests of FC-77 systems	
138	O588	Perform leak repairs of FC-77 systems	
139	O589	Perform power-off entry or exit procedures in antenna pedestals	
140	O590	Perform power-on entry or exit procedures in antenna pedestals	
141	O591	Perform visual inspections of FC-77 systems	
142	O592	Remove or replace antenna manifold loads	
143	O593	Remove or replace antenna waveguide pressure windows	
144	O594	Remove or replace antenna waveguide switches	
145	O595	Remove or replace antenna waveguides	
146	O596	Remove or replace beam offset phase shifters	
147	O597	Remove or replace beam steering drivers	
148	O598	Remove or replace beam steering phase shifters	
149	O599	Remove or replace blowers	
150	O600	Remove or replace brush block assemblies	
151	O601	Remove or replace coolant thermistors	
152	O602	Remove or replace coupler isolators	
153	O603	Remove or replace FC-77 coolant lines	
154	O604	Remove or replace flow meters	
155	O605	Remove or replace fluid coolant filters or elements	
156	O606	Remove or replace low-noise assemblies (LNAs)	
157	O607	Remove or replace load thermistors	
158	O608	Remove or replace LNAs bulk power supplies	
159	O609	Remove or replace microwave amplifiers	
160	O610	Remove or replace microwave receivers	

0013			Remove/replace equipment maintenance (Continued)
161	O611	Remove or replace noise source diodes
162	O612	Remove or replace orthomode junctions
163	O613	Remove or replace phase shifter control units
164	O614	Remove or replace phase shifter driver units (PSDUs)
165	O615	Remove or replace pressurized reservoirs
166	O616	Remove or replace PSDU transformers
167	O617	Remove or replace receiver protector drivers
168	O618	Remove or replace receiver protectors
169	O619	Remove or replace relays
170	O620	Remove or replace RF test assemblies
171	O621	Remove or replace rotary joints
172	O622	Remove or replace septum polarizers
173	O623	Remove or replace thermal cooling antenna pedestal equipment switches
174	O624	Remove or replace thermal stabilization units
175	O625	Remove or replace 23-dB or 27-dB couplers
176	O626	Remove or replace 25-dB coaxial couplers
177	O628	Visually inspect condition of rotodome interiors, other than during phase inspections
178	Q668	Apply external AC and DC power to aircraft
179	Q671	Assist in E-3A ground defueling operations
180	Q672	Assist in E-3A ground refueling operations
181	Q673	Assist in preflight or postflight inspections
182	Q676	Load or unload special mission equipment on or off of aircraft, such as *spectrum analyzers* or FFTs
183	Q678	Perform wing walking
184	Q679	Place or remove aircraft wheel chocks
185	Q681	Tow aircraft
186	Q682	Wash aircraft

0014			Ground radar systems supervision
1	B48	Supervise Airborne Warning and Control Radar Specialists (AFSC 45554)
2	B49	Supervise Airborne Warning and Control Radar Technicians (AFSC 45574)
3	B51	Supervise Apprentice Airborne Warning and Control Radar Specialists (AFSC 45534)
4	F171	Verify accuracies of daily inputs in CAMS

0015			CAMS quality assurance
1	F148	Change CAMS errors noted during daily verification process
2	F149	Change CAMS job standard narratives
3	F151	Change CAMS work unit codes
4	F152	Change CAMS workcenter narratives
5	F154	Conduct CAMS training
6	F161	Perform CAMS inquiries for training status

0016		Hot-mockup functions/operational checks
1	K341	Operationally check acoustical enclosures
2	K342	Operationally check arc detectors
3	K343	Operationally check BTGs
4	K344	Operationally check cathode housings
5	K345	Operationally check electromagnetic interference (EMI) filters
6	K346	Operationally check ethylene glycol and water (EGW) inlet manifolds
7	K347	Operationally check floating deck pulsers
8	K348	Operationally check ground deck pulsers
9	K349	Operationally check high-power microwave assemblies
10	K350	Operationally check high-voltage (HV) auxiliaries
11	K351	Operationally check HV filters
12	K352	Operationally check HV regulators
13	K353	Operationally check HV transformers
14	K354	Operationally check ion pump power supplies
15	K355	Operationally check klystron power amplifiers
16	K356	Operationally check low-voltage auxiliaries
17	K357	Operationally check low-voltage power supplies
18	K358	Operationally check module assemblies
19	K359	Operationally check overcurrent monitors
20	K360	Operationally check power distribution units
21	K361	Operationally check predrivers
22	K362	Operationally check protection and control assemblies
23	K363	Operationally check radar maintenance control panel (RCMP) bulk power supplies
24	K364	Operationally check radio frequency (RF) sample assemblies
25	K365	Operationally check RCMP circuit cards
26	K366	Operationally check RCMP regulators
27	K367	Operationally check RDC circuit cards
28	K368	Operationally check RDC inverters
29	K369	Operationally check RDC power sequence and dumps
30	K370	Operationally check RDC regulators
31	K371	Operationally check solenoid power supplies
32	K372	Operationally check transmitter angle control (TACs)
33	K373	Operationally check TAC thermal assemblies
34	K374	Operationally check trigger pulse amplifiers

0017		IFF Bench check functions
1	N536	Bench check IFF antenna controls
2	N537	Bench check IFF antenna drives
3	N538	Bench check IFF eight-way power dividers
4	N544	Bench check IFF RF detectors
5	N546	Bench check IFF three-way power dividers

0018		Peculiar test equipment repair
1	J320	Adjust or align fast fourier transform (FFT) test sets
2	J321	Bench check APM-401 radar test sets
3	J322	Bench check APM-402 radar test sets
4	J324	Bench check D1000 ion pump power supplies
5	J325	Bench check FFT test sets
6	J327	Bench check processor memory control units (PMCUs)
7	J329	Calibrate APM-401 radar test sets
8	J330	Calibrate APM-402 radar test sets
9	J332	Repair APM-401 radar test sets
10	J333	Repair APM-402 radar test sets
11	J334	Repair FFT test sets
12	J336	Repair PMCUs

0019		Tasks not referenced
1	A2	Assign sponsors for newly assigned personnel
2	A3	Coordinate maintenance with job control
3	A11	Establish budget or financial requirements
4	A12	Establish corrosion control programs
5	A22	Schedule personnel for alert or flight duty
6	A23	Schedule personnel for leaves, passes, or temporary duty (TDY)
7	B25	Adjust daily maintenance plans to meet operational commitments
8	B31	Direct development or maintenance of status boards, graphs, or charts
9	B32	Direct flightline maintenance activities
10	B33	Direct maintenance of administrative files
11	B36	Direct quality assurance programs
12	B37	Direct shop maintenance activities
13	B39	Implement cost-reduction programs
14	B43	Initiate personnel action requests
15	B45	Maintain contingency plans
16	C55	Analyze inspection reports or charts
17	C57	Complete USAF Graduate Evaluation Program evaluations
18	C62	Evaluate budget or financial requirements
19	C63	Evaluate corrosion control programs
20	C69	Evaluate unit alert or emergency procedures
21	C75	Serve on aircrew evaluation boards
22	C76	Write civilian performance ratings or supervisory appraisals
23	D80	Assign course instructors
24	D82	Conduct field training detachment (FTD) instruction
25	D88	Conduct training conferences or briefings
26	D95	Develop advanced radar maintenance training set (ARMTS) software
27	D96	Develop new equipment training programs
28	D100	Establish study reference files
29	D110	Write training reports
30	E111	Certify status of reparable, serviceable, or condemned parts
31	E112	Complete accident report forms

32	E116	Develop equipment checklists
33	E117	Develop worksheets or logs
34	E118	Dispose of hazardous materials
35	E122	Establish or maintain personnel security access lists
36	E129	Maintain authorized entrance lists
37	E130	Maintain benchstock
38	E131	Maintain currency requirements, such as flight physicals, life support training, or altitude chambers
39	E132	Maintain equipment accounts
40	E133	Maintain flying or alert schedules
41	E134	Maintain hazardous materials forms
42	E135	Maintain lists of classified materials or documents
43	E136	Maintain preventive maintenance inspection (PMI) listings
44	E137	Maintain programmable read only memory (PROM) data, such as data sheets or paper tapes
45	E138	Maintain special recoverable asset maintenance spares (SPRAMS) accounts
46	E139	Maintain supply transaction listings, such as daily document registers or priority monitor reports
47	E140	Maintain systems performance or maintenance logs
48	E141	Maintain test measurement and diagnostic equipment (TMDE) calibration listings or schedules
49	E142	Maintain vehicle control logs
50	E143	Perform dispatch duties
51	F157	Determine CAMS training requirements
52	F158	Implement CAMS workcenter training programs
53	F165	Plan or schedule CAMS training
54	F168	Start or stop CAMS job following events
55	F169	Track CAMS job following events
56	F170	Track manning data using CAMS
57	G173	Clean strut cables
58	G176	Fabricate coaxial or triaxial cables
59	G177	Fabricate multiconductor cables
60	G180	Inspect equipment shock mounts
61	G192	Remove or replace air ducts
62	G193	Remove or replace air filters
63	G197	Remove or replace equipment shock mounts
64	G198	Remove or replace filter boxes
65	G206	Remove or replace thermostat assemblies
66	G207	Remove or replace time meters
67	H218	Complete AFTO Forms 244 and 245 (Industrial/Support Equipment Record)
68	H251	Operate high-frequency (HF) radios
69	H255	Perform flight tests for new equipment validation
70	H256	Perform flight tests for new flight procedures
71	H259	Pick up or return mission computer tapes from operations dispatch
72	I273	Demonstrate use of life preservers, parachutes, or oxygen masks to passengers
73	I276	Instruct extra crewmembers or passengers on in-flight or ground emergency procedures

74	I288	Order aircrew flight lunches
75	I289	Order aircrew transportation
76	I293	Perform crew information file checks
77	I301	Pick up and inspect in-flight lunches
78	I302	Pick up or turn in aircraft life support equipment
79	I303	Pick up or turn in coffee jugs, water jugs, or ovens
80	J323	Bench check digital-to-analog converters (RIBs)
81	J326	Bench check heat sources
82	J328	Bench check PROM programmers
83	J331	Calibrate ion pump power supplies
84	J335	Repair heat sources
85	J337	Repair PROM programmers
86	J338	Repair RIBs
87	K339	Bench check acoustical enclosures
88	K340	Bench check bit target generators (BTGs)
89	K375	Repair acoustical enclosures
90	K376	Repair BTGs
91	K377	Repair electronic waveguide switches
92	K378	Repair EMI filters
93	K379	Repair floating deck pulsers
94	K380	Repair HV auxiliaries
95	K381	Repair low-voltage power supplies
96	K382	Repair module assemblies
97	K383	Repair power distribution units
98	K384	Repair protection and control assemblies
99	K385	Repair solenoid power supplies
100	K386	Repair TAC thermal assemblies
101	K387	Repair transmit angle controls
102	L400	Fault isolate digital land mass blankers (DLMBs) using BIT/FITs
103	L401	Fault isolate DLMBs manually
104	L402	Fault isolate maritime surveillance capability (MSC) receivers using BIT/FITs
105	L403	Fault isolate MSC receivers manually
106	L429	Override system time-out clocks
107	L433	Perform cooling loss actions on surveillance radars
108	L439	Perform radar emergency shutdowns
109	L448	Reconfigure DDP or RDC power inverters
110	L454	Remove or replace circuit card assemblies within RDCs
111	M489	Perform visual inspections of LCSs
112	M490	Perform visual inspections of SF-6 systems
113	N539	Bench check IFF interrogator KIR computers
114	N541	Bench check IFF radar target data processors (RTDPs)
115	N551	Perform cooling loss actions on IFF equipment
116	N574	Repair IFF antenna controls
117	N575	Repair IFF antenna drives
118	N577	Repair IFF receivers
119	N580	Repair IFF RTDPs

120	N583	Troubleshoot IFF interrogator KIR computers
121	N584	Visually inspect IFF antenna equipment, other than during phase inspections
122	O627	Service air filters
123	P632	Detect and report chemical warfare agents
124	P637	Establish equipment security at mission locations
125	P638	Fire weapons, such as .38, .45 or 9mm handguns or M-16 rifles
126	P639	Identify and report suspected ordnance
127	P643	Maintain security throughout flight phase of deployments
128	P660	Practice duress code procedures
129	P665	Reconfigure aircraft for specific mission requirements
130	P666	Store equipment at mission locations
131	Q669	Assist in aircraft brake changes
132	Q670	Assist in aircraft tire changes
133	Q674	Deice aircraft
134	Q677	Marshall aircraft
135	Q680	Service aircraft latrines

THIS PAGE INTENTIONALLY LEFT BLANK

END