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# UNITED STATES AIR FORCE

# OCCUPATIONAL SURVEY REPORT

## LIQUID FUEL SYSTEMS MAINTENANCE

**AFSC 3E4X2**

**OSSN: 2392**

**JANUARY 2000**


**OCCUPATIONAL ANALYSIS PROGRAM**
**AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON**
**AIR EDUCATION and TRAINING COMMAND**
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## PREFACE

This report presents the results of an Air Force Occupational Survey of the Liquid Fuel Systems Maintenance career ladder, Air Force Specialty Code (AFSC) 3E4X2. Authority for conducting occupational surveys is contained in AFI 36-2623. Computer products used in this report are available for use by operations and training officials.

The survey instrument was developed by Mr. Scott Vap. Computer programming support was provided by Mrs. Rebecca Hernandez. Ms. Dolores Navarro provided administrative support. Ms. Kimberly Williams analyzed the data and wrote the final report. This report has been reviewed and approved by Lt Col Roger W. Barnes, Chief, Airman Analysis Section, Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS).

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 AFOMS/OMYXI, 1550 5th Street East, Randolph Air Force Base, Texas 78150-4449, or by calling DSN 487-5543. For information on the Air Force occupational survey process or other on-going projects, visit our web site at http://www.omsq.af.mil.

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## SUMMARY OF RESULTS

1. **Survey Coverage**: The Liquid Fuel Systems Maintenance career ladder was surveyed to provide current job and task data for use in updating career ladder documents and training programs. Survey results are based on responses from 224 members accounting for 45 percent of the total population surveyed. Of the 224 respondents, 165 were active duty (AD), 34 were Air National Guard (ANG), and 25 were Air Force Reserve Command (AFRC). Responses were received from 56 percent of all assigned AD personnel, 17 percent of all assigned ANG personnel, and 30 percent of all assigned AFRC personnel. The total sample (N=224) accounts for 39 percent of all assigned AD, ANG, and AFRC members. All major commands (MAJCOMs) are well represented in the survey sample.

2. **Specialty Jobs**: Two clusters and two jobs were identified in the career ladder structure analysis. The Liquid Fuel Systems Maintenance Cluster and the General Maintenance Cluster are oriented toward technical task performance and account for 79 percent of the survey population. The Reserve Forces Readiness Job focuses on the performance of mobility, contingency, and Prime base engineer emergency force (BEEF) activities. Members of the Management Job primarily perform management, training, and supply activities.

3. **Career Ladder Progression**: A typical pattern of progression is noted within the AFSC 3E4X2 career ladder. Personnel at the 3-skill level and 5-skill level work in the technical jobs of the career ladder and spend most of their time on technical tasks. Members of AFSC 3E452 also perform general management, supervisory, training, and supply tasks. As incumbents move up to the 7-skill level, they perform many more supervisory tasks but still spend 60 percent of their time performing the technical tasks of the career ladder. Comparative analysis across the Duty Air Force Specialty Code (DAFSC) groups for the service components reveals that the same pattern holds for the ANG and AFRC 5- and 7-skill level members although the AD 7-skill level members spend more time on management, supervisory, and training activities, especially compared to the ANG DAFSC 3E472 personnel.

4. **Training Analysis**: The current AFSC 3E4X2 Specialty Training Standard (STS) and Plan of Instruction (POI) are supported by occupational survey report (OSR) data. Training, functional, and career field personnel are to be commended for producing an STS and POI that are well supported by the field. Many tasks not referenced to the STS and POI, however, should be reviewed to determine modifications that may be necessary to improve the effectiveness or efficiency of training.

5. **Job Satisfaction**: Job satisfaction among AFSC 3E4X2 personnel is higher overall for the 49-96 months' and 97+ months' Total Active Federal Military Service (TAFMS) groups but lower for the 1-48 months' TAFMS groups compared to the 1998 sample of like Support AFSCs. Reenlistment intentions, however, are slightly higher than the comparative sample for first-and second-enlistment personnel. Job satisfaction is also lower for first-enlistment members in the current survey compared to the 1997 survey sample.

6. **Implications**: Survey results indicate the present classification structure accurately portrays the jobs performed in this career ladder. Progression through the career ladder is typical of most AFSCs. Training documents warrant review for the possible addition of elements concerning specific tasks with high percent members performing, training emphasis, and task difficulty. Job satisfaction ratings are higher overall when compared to similar AFSCs except for first-enlistment personnel.

# OCCUPATIONAL SURVEY REPORT (OSR)
# LIQUID FUEL SYSTEMS MAINTENANCE
# (AFSC 3E4X2)

## INTRODUCTION

This is a report of an occupational survey of the Liquid Fuel Systems Maintenance career ladder conducted by the Air Force Occupational Measurement Squadron (AFOMS). The current Liquid Fuel Systems Maintenance career ladder was created in October 1993. Survey data will be used to identify current utilization patterns among career ladder personnel and evaluate career ladder documents and training programs.

### Background

As described in the AFMAN 36-2108, *Airman Classification,* 31 October 1999, Specialty Description, 31 October 1999, Liquid Fuel Systems Maintenance personnel install, inspect, maintain, troubleshoot, repair, and modify liquid fuel storage, distribution, and dispensing systems. This includes checking components for operation, adjustment, pressures, and internal and external leaks under pressure. The Liquid Fuel Systems Maintenance personnel also perform facility surveys, survey proposed work to determine resource requirements, and prepare cost estimates for in-service work.

Personnel entering the AFSC 3E4X2 career ladder must attend the J3ABR3E432-003, Liquid Fuel Systems Maintenance Apprentice course at Sheppard AFB TX. This course is designed to train students on the proper procedures for the inspection and maintenance of liquid conventional fuel storage and dispensing systems. Instruction is provided on the fundamentals of basic hydraulics and electricity; fabrication of piping and fitting assemblies; inspection and maintenance of storage tanks, pumps, unloading facilities, filtration systems, gauges, meters, valves, strainers, and Type I, II, III, and IV hydrant aircraft refueling systems components; and troubleshooting the installed mechanical and hydrant systems used for storing and dispensing aviation and ground fuels. Students are also instructed on the application of Air Force technical orders, manuals, directives, maintenance publications, and forms.

Entry into this career ladder currently requires an Armed Forces Vocational Aptitude Battery (ASVAB) score of Mechanical – 44. A strength factor of "G" (Weight lift of 40 lbs) is also required. For entry into this specialty, normal color vision as defined in AFI 48-123, *Medical Examination and Standards*, is mandatory. For award, entry, and retention of this AFSC, qualification to operate government vehicles according to AFMAN 24-309, *Vehicle Operations*, is mandatory.

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## SURVEY METHODOLOGY

### Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI) Occupational Survey Study Number (OSSN) 2392, dated July 1999. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, pertinent tasks from the previous survey instrument, and data from the last OSR. The preliminary task list was refined and validated through personal interviews with 44 subject-matter experts (SMEs) at the following training location and operational bases:

| BASE | UNIT VISITED | REASON FOR VISIT |
|---|---|---|
| Sheppard AFB TX | 366 TRS | Resident technical training school |
| Eglin AFB FL | 96 CES | AFMC base |
| Hurlburt Field FL | 16 CES | AFSOC base |
| Minot AFB ND | 5 CES | Minuteman missiles |
| Grand Forks AFB ND | 319 CES | AMC base |
| Travis AFB CA | 60 CES | AMC base |
| Whiteman AFB MO | 509 CES | ACC base |
| Barksdale AFB LA | 2 CES | Research and development department |

The resulting JI contains a comprehensive listing of 700 tasks grouped under 18 duty headings and a background section requesting information, such as grade, base, MAJCOM assigned, organizational level, schedule worked, job title, and work or functional area. Also included in the background section are 24 questions dealing with liquid fuel systems maintenance, such as types of equipment maintained and types of systems used at the respondent's base or installation.

### Survey Administration

From July to October 1999, base training offices at operational units worldwide administered the inventory to eligible AFSC 3E4X2 personnel. Job incumbents were selected

from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Personnel Center, Randolph AFB TX. Each individual who completed the inventory first completed an identification and biographical information section and then selected each task performed in his or her current job. After selecting all tasks performed, each member then rated each of these tasks on a 9-point scale, showing relative time spent on that task, as compared to all other tasks checked. The ratings ranged from 1 (very small amount time spent) through 5 (about average time spent) to 9 (very large amount time spent). To determine relative time spent for each task checked by a respondent, all of the incumbent's ratings are assumed to account for 100 percent of his or her time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time for each task. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percent time spent.

## Survey Sample

Personnel were selected to participate in this survey so as to ensure an accurate representation across MAJCOMs and military paygrade groups. All eligible AFSC 3E4X2 personnel were mailed survey disks. Table 1 reflects the percentage distribution, by MAJCOM, of assigned AFSC 3E4X2 personnel as of July 1999. The 224 respondents in the final sample represent 39 percent of the total assigned personnel and 45 percent of the total personnel surveyed. Table 2 reflects the paygrade distribution for these AFSC 3E4X2 personnel.

TABLE 1

COMMAND DISTRIBUTION OF AFSC 3E4X2 PERSONNEL

| COMMAND | PERCENT OF ASSIGNED* | PERCENT OF SAMPLE |
|---|---|---|
| ACC | 13 | 21 |
| PACAF | 10 | 15 |
| AMC | 10 | 13 |
| AFMC | 7 | 9 |
| AETC | 4 | 6 |
| USAFE | 4 | 5 |
| OTHERS | 3 | 5 |
| ANG | 35 | 15 |
| AFRC | 14 | 11 |

TOTAL ASSIGNED* = 580
TOTAL SURVEYED** = 499
TOTAL IN SURVEY SAMPLE = 224
PERCENT OF ASSIGNED IN SAMPLE = 39%
PERCENT OF SURVEYED IN SAMPLE = 45%

* Assigned strength as of July 1999

** Excludes personnel in PCS, student, or hospital status, or less than 6 weeks on the job

TABLE 2

PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

| GRADE | PERCENT OF ASSIGNED* | PERCENT OF SAMPLE |
|---|---|---|
| E-2 – E-3 | 15 | 23 |
| E-4 | 19 | 21 |
| E-5 | 27 | 24 |
| E-6 | 26 | 22 |
| E-7 | 12 | 9 |
| E-8 | - | - |

* Assigned strength as of July 1999
" - " indicates less than 1 percent

Both Command and Paygrade distribution of the survey sample are close to the percent assigned with the exception of the ANG members. The sample is a true representation of the career ladder population assigned to the MAJCOMs and AFRC. Only 34 ANG members provided usable returns out of the 182 ANG members eligible to participate in the survey.

## 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 3E4X2 personnel (generally E-6 or E-7 craftsmen) also completed a second disk for either training emphasis (TE) or task difficulty (TD). These disks were processed separately from the JIs. This information is used in a number of different analyses discussed in more detail within the report.

**Training Emphasis (TE)**: TE is a rating of the amount of emphasis that should be placed on tasks in entry-level training. The 13 senior noncommissioned officers (NCOs) who completed a TE disk were asked to select tasks they felt require some sort of structured training for entry-level personnel and then indicate how much training emphasis these tasks should receive, from 1 (extremely low emphasis) to 9 (extremely high emphasis). Structured training is defined as training provided at resident training schools, field training detachments (FTDs), mobile training teams (MTTs), formal on-the-job-training (OJT), or any other organized training method. Interrater agreement for these 13 raters was acceptable. The average TE rating was 2.75, with a

standard deviation of 2.37. Any task with a TE rating of 5.12 or above is considered to have high TE.

**Task Difficulty (TD)**: TD is an estimate of the amount of time needed to learn how to do each task satisfactorily. The 35 senior NCOs who completed TD disks were asked to rate the difficulty of each task using a 9-point scale (extremely low to extremely high). Interrater reliability was acceptable. Ratings were standardized so tasks have an average difficulty of 5.00 and a standard deviation of 1.00. Any task with a TD rating of 6.00 or above is considered to be difficult to learn.

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

## SPECIALTY JOBS

The first step in the analysis process is to identify the structure of the career ladder in terms of the jobs performed by the respondents. The Comprehensive Occupational Data Analysis Program (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 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 two independent jobs were identified within the career ladder. Figure 1 illustrates the clusters and jobs performed by AFSC 3E4X2 personnel.

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

I. LIQUID FUEL SYSTEMS MAINTENANCE CLUSTER (STG028, N=156)

A. Liquid Fuel Systems Maintenance NCOIC Job
B. Liquid Fuel Systems Maintenance Mobility Job

II. GENERAL MAINTENANCE CLUSTER (STG014, N=20)

A. Pipeline and Pit Maintenance Job
B. Tank Technician Job

III. RESERVE FORCES READINESS JOB (STG040, N=10)

IV. MANAGEMENT JOB (STG027, N=16)

The respondents forming these clusters and jobs account for 91 percent of the survey sample. The remaining 9 percent, for one reason or another, did not group into one of these

clusters or jobs. Examples of job titles for these personnel include Fuels Program Manager, Infrastructure Superintendent, Quality Assurance Evaluator, Environmental Specialist, and Interactive Courseware Developer.

**AFSC 3E4X2 CAREER LADDER SPECIALTY JOBS**
**(N = 224)**

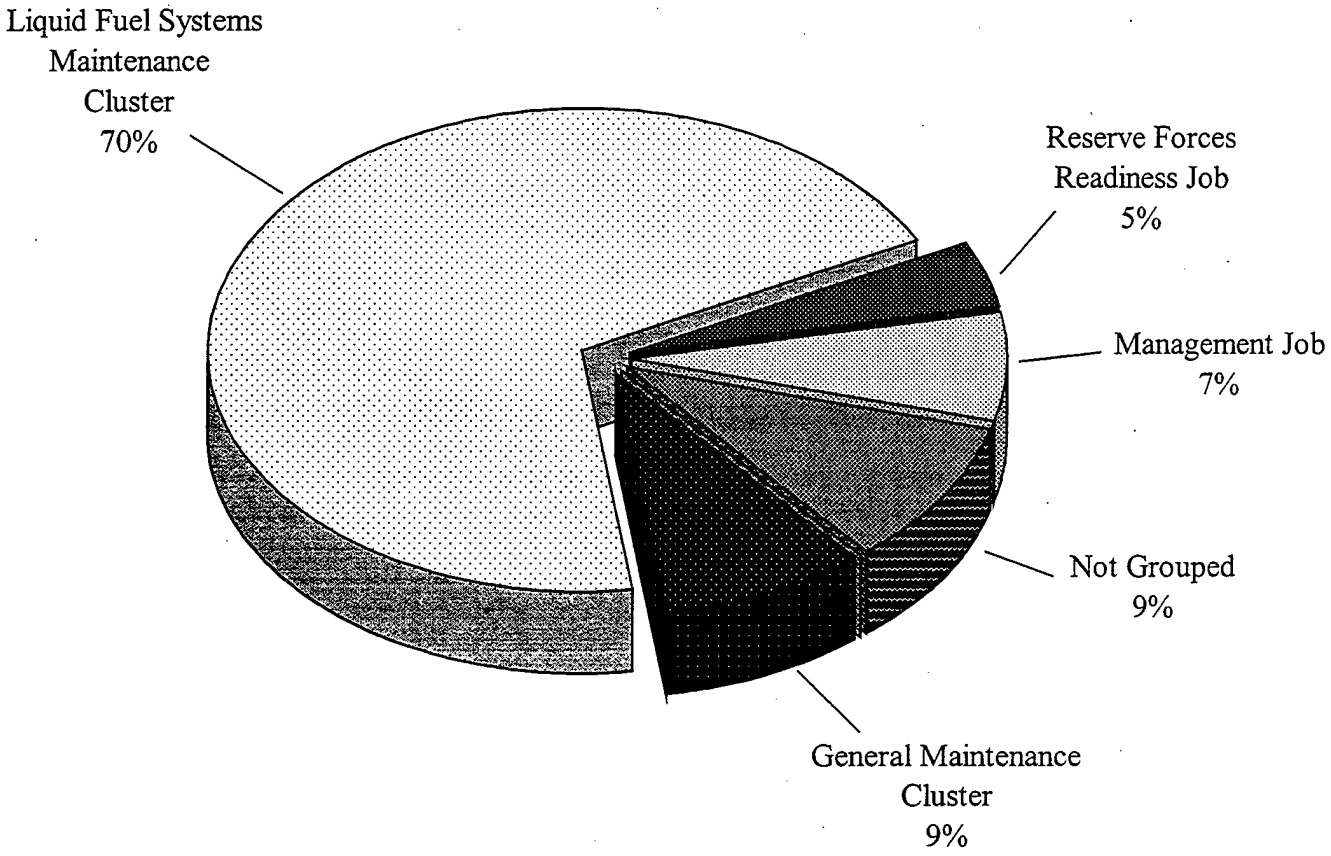


**FIGURE 1**

## Group Descriptions

The following paragraphs contain brief descriptions of the jobs and clusters identified through the career ladder structure analysis. Table 3 presents the relative time spent on duties by members of the specialty jobs and clusters. Selected background data for the jobs and clusters are provided in Table 4. Representative tasks for all of the stages and groups are contained in Appendix A.

1. LIQUID FUEL SYSTEMS MAINTENANCE CLUSTER (STG028). The 156 members of this cluster comprise 70 percent of the survey sample and are the core of the career ladder. These members perform an average of 300 tasks with the majority of their time spent performing general maintenance activities (Duty A) and maintaining fuel systems (Duty D). Typical tasks performed by the core of the career ladder include:

- Troubleshoot automatic valves
- Drain filter separators
- Operationally inspect automatic control valves or components
- Inspect valve position indicators (VPIs)
- Replace diaphragms
- Join pipes with bolted flanges
- Join pipes with threaded fittings
- Adjust packing glands on manual valves
- Adjust pressure-relief controls
- Inspect hose connections
- Install or remove pressure gauges
- Adjust rate-of-flow controls

The predominant paygrade of this job is E-5, and almost 50 percent of the members are 5-skill levels. These members average 7½ years' TAFMS and 7 years' time in career field (TICF).

Two jobs were identified within this cluster and were distinguished by the tasks performed within the areas related to management/supervision and mobility/contingency.

The **Liquid Fuel Systems Maintenance Noncommissioned Officer-in-Charge (NCOIC) Job** is comprised of 10 members, all of whom are AD members. The members of this job spend the most time performing management, supervisory, and training activities but still spend over half of their time performing the technical liquid fuel systems maintenance (LFM) tasks, such as testing vapor levels in enclosed areas and operationally inspecting automatic control valves or components.

The **Liquid Fuel Systems Maintenance Mobility Job** is comprised of seven members who are distinguished from the other members of the Liquid Fuel Systems Maintenance Cluster by the amount of time they spend performing mobility and contingency activities (Duty N). Typical tasks performed include performing self-aid and buddy care activities, inspecting chemical warfare personal protective clothing, and performing camp security.

II. GENERAL MAINTENANCE CLUSTER (STG014). The 20 airmen performing within this cluster comprise 9 percent of the survey sample. On average, they spend most of their time (34 percent) performing general maintenance activities (Duty A). They also spend an average of 11 percent of their time cleaning, inspecting, and maintaining fuel storage tanks (Duty B). The average number of tasks performed by this group is 66. Distinctive tasks performed include:

- Clean work areas
- Clean hand tools
- Cut gasket materials
- Install or remove filter-separator elements
- Clean up fuel spills with absorbent materials
- Ground portable equipment
- Thread pipes
- Replace service station fuel hoses
- Operationally inspect filter separators
- Replace nozzles
- Manually bleed air off fuel systems
- Inspect grounding cables, rods, or bonding devices

Fifty percent of these airmen hold the 5-skill level. The predominant paygrade of this cluster is E-6. The General Maintenance Cluster members average less time in the Liquid Fuel Systems Maintenance career field than the members of the core cluster and the Management Job with 3½ years' TICF. They also average 4 years' TAFMS.

Two distinct jobs within this cluster were identified and are separated by the time spent maintaining pipelines and pits and the time spent cleaning, inspecting, and maintaining fuel storage tanks.

The **Pipeline and Pit Maintenance Job** contains six members who spend most of their time performing general maintenance tasks (27 percent) and maintaining pipelines and pits (14 percent). Typical tasks performed by the members include cleaning up fuel spills with absorbent materials, replacing flange gaskets, and hydrostatically pressure-testing pipeline systems.

The **Tank Technician Job** is comprised of five members who spend most of their time cleaning, inspecting, and maintaining fuel storage tanks in addition to performing general maintenance activities. The members of this job test vapor levels in enclosed areas, inspect underground storage tank low-level or high-level floats, and perform tank cleaning worker activities.

III. RESERVE FORCES READINESS JOB (STG040). The 10 airmen in this job comprise 5 percent of the survey sample and are distinguished by the 42 percent of their time spent performing mobility and contingency activities (Duty N) and the 21 percent of their time spent performing Prime BEEF activities (Duty M). They average only 89 tasks performed indicating

their limited exposure to many technical LFM tasks performed by the core of the career ladder. Representative tasks performed by these incumbents include:

- Tear down, inspect, clean, and reassemble weapons, such as M-16 rifles
- Perform self-aid and buddy-care activities
- Perform chemical warfare agent decontamination procedures
- Perform camp security
- Participate in convoy exercises
- Perform cover and concealment techniques for work party security
- Perform camouflage procedures
- Don or doff chemical warfare personal protective clothing
- Inspect mobility bags or kits
- Identify chemical warfare agents
- Perform explosive ordnance reconnaissance
- Perform or set up site security

The predominant paygrade is E-6, and 80 percent of the members hold the 5-skill level. Seventy percent of the members in this job are in the AFRC with the remaining members in the ANG.

IV. MANAGEMENT JOB (STG027). This job consists of 16 members who spend 46 percent of their time performing management and supervisory activities in Duty O. In addition, they spend 17 percent of their time performing training activities (Duty P). They average 147 tasks performed. Their job is limited in scope to the less technical tasks within the survey as these members are primarily responsible for the management of daily LFM activities, including training, supply, and administrative activities. Typical tasks performed by these incumbents include:

- Determine or establish work assignments or priorities
- Evaluate job or position descriptions
- Evaluate personnel for promotion, demotion, reclassification, or special awards
- Inspect personnel for compliance with military standards
- Determine training requirements
- Maintain training records or files
- Evaluate work schedules
- Counsel subordinates concerning personal matters
- Conduct self-inspections or self-assessments
- Conduct supervisory performance feedback sessions
- Write recommendations for awards or decorations
- Write performance reports or supervisory appraisals

The predominant paygrade is E-6, and 69 percent of the members in the Management Job are 7-skill levels. The members of this job are the most senior members of the identified clusters and jobs as they average 14 years' TICF and 16 years' TAFMS.

## Comparison of Current Group Descriptions to Previous Study

The results of the specialty job analysis were compared to the previous OSR, dated April 1997. As shown in Table 5, the Liquid Fuel Systems Maintenance Cluster was identified in the previous survey as the General Maintenance Cluster. The General Maintenance Cluster identified in the current study was not identified in the 1997 survey. The Reserve Forces Readiness Job identified in the current study was referred to in the 1997 study as the Mobility and Contingency Cluster. Finally, the Management Job identified in the current study was listed in the 1997 study as the Supervision Cluster.

## Summary

Career ladder structure analysis identified two clusters and two jobs: Liquid Fuel Systems Maintenance Cluster, General Maintenance Cluster, Reserve Forces Readiness Job, and Management Job. The core of the career ladder (Liquid Fuel Systems Maintenance Cluster) involves the performance of technical tasks associated with the maintenance and inspection of liquid fuel systems, including automatic valves and components. The General Maintenance Cluster performs a variety of technical tasks throughout the survey, including 34 percent of their time on general maintenance tasks. The Reserve Forces Readiness Job consists of ANG and AFRC members who spend the majority of their time performing mobility, contingency, and Prime BEEF activities. The Management Job contains the more senior members of the career ladder who spend most of their time performing management, supervisory, training, and supply tasks.

TABLE 3

RELATIVE PERCENT TIME SPENT ON DUTIES BY SPECIALTY JOBS AND CLUSTERS

| DUTIES | | Liquid Fuel Systems Maintenance Cluster (STG028) (N=156) | General Maintenance Cluster (STG014) (N=20) | Reserve Forces Readiness Job (STG040) (N=10) | Management Job (STG027) (N=16) |
|---|---|---|---|---|---|
| A | PERFORMING GENERAL MAINTENANCE ACTIVITIES | 11 | 34 | 7 | 3 |
| B | CLEANING, INSPECTING, OR MAINTAINING FUEL STORAGE TANKS | 9 | 11 | - | 3 |
| C | PERFORMING ENVIRONMENTAL OR SAFETY ACTIVITIES | 5 | 6 | - | 4 |
| D | MAINTAINING FUEL SYSTEMS | 11 | 7 | 1 | 1 |
| E | MAINTAINING AUTOMATIC VALVES AND COMPONENTS | 10 | 5 | 1 | 3 |
| F | MAINTAINING MANUAL VALVES AND COMPONENTS | 4 | 2 | 2 | - |
| G | MAINTAINING FUEL PUMPS | 3 | 3 | - | - |
| H | MAINTAINING PIPELINES AND PITS | 6 | 7 | 1 | 1 |
| I | MAINTAINING SERVICE STATION PUMP ASSEMBLIES | 8 | 3 | 1 | 2 |
| J | MAINTAINING FUEL LOADING OR OFF-LOADING EQUIPMENT | 4 | 4 | - | - |
| K | PERFORMING FUEL SYSTEMS DEACTIVATION OR DECOMMISSIONING ACTIVITIES | 3 | 3 | - | - |
| L | PERFORMING ELECTRICAL ACTIVITIES | 4 | 1 | - | - |
| M | PERFORMING PRIME BASE ENGINEER EMERGENCY FORCE (BEEF) ACTIVITIES | 3 | 3 | 21 | 3 |
| N | PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES | 6 | 6 | 42 | 6 |
| O | PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES | 7 | 1 | 9 | 46 |
| P | PERFORMING TRAINING ACTIVITIES | 3 | 1 | 8 | 17 |
| Q | PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES | 1 | - | 1 | 3 |
| R | PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES | 2 | 2 | 4 | 7 |

" - " indicates less than 1 percent

TABLE 4

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS AND CLUSTERS

| | Liquid Fuel Systems Maintenance Cluster (STG028) | General Maintenance Cluster (STG014) | Reserve Forces Readiness Job (STG040) | Management Job (STG027) |
|---|---|---|---|---|
| NUMBER IN GROUP | 156 | 20 | 10 | 16 |
| PERCENT OF SAMPLE | 70% | 9% | 5% | 7% |
| PERCENT IN CONUS | 75% | 85% | 100% | 69% |
| SKILL-LEVEL DISTRIBUTION: | | | | |
| 3E432 | 31% | 35% | 0% | 0% |
| 3E452 | 48% | 50% | 80% | 31% |
| 3E472 | 21% | 15% | 20% | 69% |
| ADDITIONAL INFORMATION | | | | |
| PREDOMINANT GRADE | E-5 | E-6 | E-6 | E-6 |
| PERCENT SUPERVISING | 40% | 20% | 40% | 81% |
| AVERAGE NUMBER OF TASKS PERFORMED | 300 | 66 | 89 | 147 |

TABLE 5

SPECIALTY JOB AND CLUSTER COMPARISONS
BETWEEN CURRENT SURVEY AND 1997 SURVEY

| CURRENT SURVEY (N=224) | % | 1997 SURVEY (N=309) | % |
|---|---|---|---|
| LIQUID FUEL SYSTEMS MAINTENANCE CLUSTER | 70 | GENERAL MAINTENANCE CLUSTER | 72 |
| GENERAL MAINTENANCE CLUSTER | 9 | * | |
| RESERVE FORCES READINESS JOB | 5 | MOBILITY AND CONTINGENCY CLUSTER | 11 |
| MANAGEMENT CLUSTER | 7 | SUPERVISION CLUSTER | 11 |
| NOT GROUPED | 9 | NOT GROUPED | 6 |

" * " indicates no match in report

## ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information may then be used to evaluate how well career ladder documents, such as the AFMAN 36-2108, *Airman Classification,* Specialty Description and the Career Field Education and Training Plan (CFETP), reflect what career ladder personnel are actually doing in the field.

The distribution of skill-level groups *for the total survey sample* (AD, ANG, and AFRC members) across the career ladder jobs and clusters is displayed in Table 6, while Table 7 offers another perspective by displaying the relative percent time spent on each duty across skill-level groups. A typical pattern of progression is noted within the AFSC 3E4X2 career ladder. Personnel at the 3-skill level and 5-skill level work in the technical jobs of the career ladder and spend most of their time on technical tasks. As incumbents progress to the 7-skill level, they perform many more supervisory and training tasks but still spend 60 percent of their time performing the technical tasks of the career ladder.

TABLE 6

DISTRIBUTION OF DAFSC GROUP MEMBERS ACROSS SPECIALTY JOBS AND CLUSTERS
(PERCENT RESPONDING)

| SPECIALTY JOBS | | 3E432 (N=57) | 3E452 (N=106) | 3E472 (N=61) |
|---|---|---|---|---|
| I. | LIQUID FUEL SYSTEMS MAINTENANCE CLUSTER | 81 | 70 | 54 |
| II. | GENERAL MAINTENANCE CLUSTER | 12 | 10 | 5 |
| III. | RESERVE FORCES READINESS JOB | 0 | 8 | 3 |
| IV. | MANAGEMENT JOB | 0 | 5 | 18 |
| VI. | NOT GROUPED | 7 | 7 | 20 |

TABLE 7

RELATIVE PERCENT TIME SPENT ON DUTIES BY DAFSC GROUPS

| DUTIES | | 3E432 (N=57) | 3E452 (N=106) | 3E472 (N=61) |
|---|---|---|---|---|
| A | PERFORMING GENERAL MAINTENANCE ACTIVITIES | 15 | 14 | 10 |
| B | CLEANING, INSPECTING, OR MAINTAINING FUEL STORAGE TANKS | 9 | 8 | 6 |
| C | PERFORMING ENVIRONMENTAL OR SAFETY ACTIVITIES | 5 | 5 | 4 |
| D | MAINTAINING FUEL SYSTEMS | 12 | 8 | 7 |
| E | MAINTAINING AUTOMATIC VALVES AND COMPONENTS | 10 | 7 | 6 |
| F | MAINTAINING MANUAL VALVES AND COMPONENTS | 5 | 3 | 2 |
| G | MAINTAINING FUEL PUMPS | 3 | 3 | 2 |
| H | MAINTAINING PIPELINES AND PITS | 7 | 5 | 4 |
| I | MAINTAINING SERVICE STATION PUMP ASSEMBLIES | 8 | 6 | 4 |
| J | MAINTAINING FUEL LOADING OR OFF-LOADING EQUIPMENT | 5 | 4 | 2 |
| K | PERFORMING FUEL SYSTEMS DEACTIVATION OR DECOMMISSIONING ACTIVITIES | 4 | 2 | 1 |
| L | PERFORMING ELECTRICAL ACTIVITIES | 4 | 3 | 2 |
| M | PERFORMING PRIME BASE ENGINEER EMERGENCY FORCE (BEEF) ACTIVITIES | 3 | 4 | 3 |
| N | PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES | 5 | 10 | 7 |
| O | PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES | 2 | 9 | 25 |
| P | PERFORMING TRAINING ACTIVITIES | 1 | 4 | 9 |
| Q | PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES | - | 1 | 2 |
| R | PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES | 1 | 4 | 4 |

" - " indicates less than 1 percent

## AD Skill-Level Descriptions

The distribution of skill-level groups for the AD survey sample across the career ladder jobs and clusters is displayed in Table 8 and shows that the majority of the AD sample for all skill levels sampled perform tasks associated with the Liquid Fuel Systems Maintenance Cluster.

**DAFSC 3E432** Representing 25 percent of the survey sample, these 56 airmen perform an average of 249 tasks. Table 9 reflects the percent time spent on duties by AD DAFSC 3E432 personnel. Members holding DAFSC 3E432 spend 95 percent of their time performing technical tasks in Duties A through N. Twenty-seven percent of their time is spent performing general LFM tasks of Duty A and maintaining fuel systems of Duty D. Representative tasks performed by these members are listed in Table 10.

**DAFSC 3E452** The 74 members of this group account for 33 percent of the survey sample. They perform an average of 275 tasks, the largest number of tasks performed by 5-skill level members in the three service components. Table 9 provides a comparison of the relative time spent on duties at the 5-skill level. This table shows a slight decrease in the amount of time spent performing technical tasks in most duties and an increase in the number of personnel performing the supervisory tasks of Duty O. The DAFSC 3E452 members spend slightly more time maintaining service station pump assemblies (Duty I) compared to the DAFSC 3E432 members. The 5-skill level members spend the same relative amount of time performing environmental or safety activities (Duty C), maintaining fuel pumps (Duty G), performing electrical activities (Duty L), and performing mobility and contingency activities (Duty N) versus the 3-skill level members.

Table 11 lists representative tasks performed by these DAFSC 3E452 personnel. Table 12 reflects those tasks which best differentiate the 3-skill levels from the 5-skill levels. This table shows that over 20 percent more 3-skill levels perform six technical tasks primarily related to maintaining pipelines and pits compared to the number of 5-skill level members performing the same tasks. Table 12 also reveals that the 5-skill levels perform many supervisory and training tasks rarely performed at the 3-skill level.

**DAFSC 3E472** These 35 members perform an average of 282 tasks and represent 16 percent of the survey sample. Table 9 reflects the percent time spent on duties by DAFSC 3E472 members and shows decreases in the amount of time spent by members performing the technical tasks in 13 out of 14 duty areas. Forty-five percent of their time is spent on nontechnical tasks involving management and supervision, training, administration, and supply. This is an increase of time spent performing nontechnical tasks of 25 percent compared to the 5-skill level members. They spend 29 percent of their time performing management and supervisory tasks.

Representative tasks performed by 7-skill level members are reflected in Table 13. Table 14 reflects tasks which best differentiate between 5- and 7-skill levels. This table clearly shows a higher percentage of 5-skill level members performing certain technical tasks in a variety of areas, including the maintenance of manual valves and fuel loading and off-loading equipment. The most significant difference in the performance of specific tasks between the AD 5-skill level and 7-skill level members is revealed in the management, supervisory, and training areas.

## AD Skill-Level Analysis Summary

Progression in the Liquid Fuel Systems Maintenance career ladder follows a regular pattern of highly technical job focus at the 3-skill level with a broadening into supervision and management at the 5- and 7-skill levels. Three- and 5-skill level airmen perform many tasks in common, and both groups spend the majority of their time performing technical LFM tasks. The 5-skill level members, while performing similar technical tasks, perform some supervisory and management tasks. At the 7-skill level, members still perform a substantial number of technical tasks but demonstrate a strong shift toward supervisory functions.

TABLE 8

DISTRIBUTION OF AD DAFSC GROUP MEMBERS ACROSS SPECIALTY JOBS AND CLUSTERS
(PERCENT RESPONDING)

| SPECIALTY JOBS | | 3E432 (N=56) | 3E452 (N=74) | 3E472 (N=35) |
|---|---|---|---|---|
| I. | LIQUID FUEL SYSTEMS MAINTENANCE CLUSTER | 86 | 84 | 66 |
| II. | GENERAL MAINTENANCE CLUSTER | 13 | 3 | 0 |
| III. | RESERVE FORCES READINESS JOB | 0 | 0 | 0 |
| IV. | MANAGEMENT JOB | 0 | 7 | 20 |
| VI. | NOT GROUPED | 1 | 6 | 14 |

TABLE 9

RELATIVE PERCENT TIME SPENT ON DUTIES BY AD DAFSC 3E4X2 GROUPS

| DUTIES | | 3E432 (N=56) | 3E452 (N=74) | 3E472 (N=35) |
|---|---|---|---|---|
| A | PERFORMING GENERAL MAINTENANCE ACTIVITIES | 15 | 12 | 6 |
| B | CLEANING, INSPECTING, OR MAINTAINING FUEL STORAGE TANKS | 9 | 8 | 7 |
| C | PERFORMING ENVIRONMENTAL OR SAFETY ACTIVITIES | 5 | 5 | 4 |
| D | MAINTAINING FUEL SYSTEMS | 12 | 8 | 7 |
| E | MAINTAINING AUTOMATIC VALVES AND COMPONENTS | 10 | 8 | 6 |
| F | MAINTAINING MANUAL VALVES AND COMPONENTS | 5 | 4 | 2 |
| G | MAINTAINING FUEL PUMPS | 3 | 3 | 2 |
| H | MAINTAINING PIPELINES AND PITS | 7 | 6 | 4 |
| I | MAINTAINING SERVICE STATION PUMP ASSEMBLIES | 8 | 9 | 5 |
| J | MAINTAINING FUEL LOADING OR OFF-LOADING EQUIPMENT | 5 | 4 | 3 |
| K | PERFORMING FUEL SYSTEMS DEACTIVATION OR DECOMMISSIONING ACTIVITIES | 4 | 2 | 2 |
| L | PERFORMING ELECTRICAL ACTIVITIES | 4 | 4 | 2 |
| M | PERFORMING PRIME BASE ENGINEER EMERGENCY FORCE (BEEF) ACTIVITIES | 3 | 2 | 1 |
| N | PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES | 5 | 5 | 4 |
| O | PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES | 2 | 10 | 29 |
| P | PERFORMING TRAINING ACTIVITIES | 1 | 5 | 10 |
| Q | PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES | 1 | 1 | 2 |
| R | PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES | 1 | 4 | 4 |

" - " indicates less than 1 percent

TABLE 10

REPRESENTATIVE TASKS PERFORMED BY AD DAFSC 3E432 PERSONNEL

| TASKS | | PERCENT MEMBERS PERFORMING (N=56) |
|---|---|---|
| A0024 | Install or remove filter-separator elements | 98 |
| A0037 | Replace nozzles | 98 |
| A0005 | Clean work areas | 96 |
| C0097 | Clean up fuel spills with absorbent materials | 96 |
| A0003 | Clean hand tools | 96 |
| A0008 | Cut gasket materials | 96 |
| A0039 | Replace service station fuel hoses | 93 |
| A0041 | Thread pipes | 93 |
| K0385 | Drain filter separators | 91 |
| A0026 | Manually bleed air off fuel systems | 91 |
| D0168 | Install or remove pressure gauges | 91 |
| A0015 | Ground portable equipment | 89 |
| E0228 | Troubleshoot automatic valves | 88 |
| K0387 | Drain pipelines | 88 |
| K0379 | Blind flange open pipelines | 88 |
| A0028 | Operationally inspect filter separators | 86 |
| D0173 | Join pipes with bolted flanges | 86 |
| F0229 | Adjust packing glands on manual valves | 86 |
| D0174 | Join pipes with threaded fittings | 84 |
| I0341 | Replace service station nozzles | 84 |
| I0313 | Inspect service station fuel hoses | 84 |
| A0009 | Cut pipes with hand tools | 84 |
| E0198 | Adjust pressure-relief controls | 84 |
| L0411 | Perform tag-out or lock-out procedures | 82 |
| A0040 | Test vapor levels in enclosed areas | 82 |
| I0311 | Calibrate service station pump dispensing unit meters | 82 |
| A0025 | Install or remove strainer screens | 82 |
| E0199 | Adjust rate-of-flow controls | 82 |
| E0227 | Replace diaphragms | 82 |
| E0217 | Repair or replace opening or closing speed control components | 82 |
| E0220 | Repair or replace pressure-relief controls | 82 |
| E0203 | Inspect valve position indicators (VPIs) | 82 |
| H0305 | Replace flange gaskets | 80 |
| G0256 | Operationally inspect fuel pumps | 80 |
| H0300 | Pressure test pipelines using installed pumps | 80 |
| I0345 | Replace service station pump hoses | 80 |
| F0235 | Operationally inspect manual valves, other than check valves | 80 |
| E0196 | Adjust opening or closing speed controls | 80 |
| E0219 | Repair or replace pressure-reducing controls | 80 |
| J0357 | Inspect hose connections | 79 |
| J0362 | Install or remove quick disconnect couplings, such as kam-lock or drybreak | 79 |

* Average Number of Tasks Performed - 249

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY AD DAFSC 3E452 PERSONNEL

| TASKS | | PERCENT MEMBERS PERFORMING (N=74) |
|---|---|---|
| A0005 | Clean work areas | 97 |
| A0003 | Clean hand tools | 95 |
| A0039 | Replace service station fuel hoses | 92 |
| E0228 | Troubleshoot automatic valves | 92 |
| A0037 | Replace nozzles | 91 |
| A0008 | Cut gasket materials | 91 |
| A0024 | Install or remove filter-separator elements | 89 |
| I0319 | Operationally inspect service station pumps | 88 |
| J0357 | Inspect hose connections | 88 |
| C0097 | Clean up fuel spills with absorbent materials | 88 |
| A0041 | Thread pipes | 88 |
| E0207 | Operationally inspect automatic control valves or components | 86 |
| D0174 | Join pipes with threaded fittings | 85 |
| B0054 | Inspect air compressors or hoses | 85 |
| I0316 | Operationally inspect service station dispensers | 84 |
| I0341 | Replace service station nozzles | 84 |
| A0040 | Test vapor levels in enclosed areas | 84 |
| I0345 | Replace service station pump hoses | 84 |
| A0028 | Operationally inspect filter separators | 82 |
| E0203 | Inspect valve position indicators (VPIs) | 82 |
| E0200 | Inspect automatic valve main valve bodies | 82 |
| E0198 | Adjust pressure-relief controls | 82 |
| A0018 | Inspect grounding cables, rods, or bonding devices | 82 |
| E0227 | Replace diaphragms | 82 |
| I0313 | Inspect service station fuel hoses | 81 |
| L0411 | Perform tag-out or lock-out procedures | 81 |
| J0360 | Inspect quick disconnect couplings, such as kam-lock or drybreak | 81 |
| A0021 | Inspect product recovery systems | 81 |
| F0229 | Adjust packing glands on manual valves | 81 |
| D0173 | Join pipes with bolted flanges | 81 |
| A0009 | Cut pipes with hand tools | 80 |
| A0015 | Ground portable equipment | 80 |
| G0256 | Operationally inspect fuel pumps | 80 |
| J0362 | Install or remove quick disconnect couplings, such as kam-lock or drybreak | 80 |
| F0243 | Repair or replace manual valves, other than check valves | 80 |
| A0025 | Install or remove strainer screens | 78 |
| I0311 | Calibrate service station pump dispensing unit meters | 78 |
| J0367 | Operationally inspect emergency-stop switches | 78 |
| B0071 | Interpret as-built drawings | 77 |
| F0235 | Operationally inspect manual valves, other than check valves | 77 |
| K0385 | Drain filter separators | 77 |
| A0019 | Inspect loading fuel hoses | 77 |

* Average Number of Tasks Performed - 275

TABLE 12

TASKS WHICH BEST DIFFERENTIATE BETWEEN AD AFSC 3E432 AND DAFSC 3E452 PERSONNEL
(PERCENT MEMBERS PERFORMING)

| TASKS | | DAFSC 3E432 (N=56) | DAFSC 3E452 (N=74) | DIFFERENCE |
|---|---|---|---|---|
| H0307 | Replace springs on pit lids | 36 | 11 | 25 |
| K0395 | Stencil deactivated pumps, filter separators, meters, or storage tanks | 52 | 27 | 25 |
| H0272 | Flush pipelines | 54 | 31 | 22 |
| N0508 | Install or remove bladder tanks on portable or air-transportable fueling systems | 46 | 24 | 22 |
| H0283 | Maintain pits | 66 | 45 | 21 |
| I0348 | Replace service station pump shaft mechanical seals | 52 | 31 | 21 |
| P0659 | Maintain training records or files | 11 | 58 | -47 |
| O0556 | Conduct self-inspections or self-assessments | 21 | 66 | -45 |
| O0558 | Conduct supervisory orientations for newly assigned personnel | 4 | 47 | -44 |
| P0644 | Counsel trainees on training progress | 7 | 50 | -43 |
| O0572 | Direct training activities | 9 | 50 | -41 |
| P0643 | Conduct on-the-job training (OJT) | 20 | 61 | -41 |
| O0559 | Conduct supervisory performance feedback sessions | 2 | 41 | -39 |
| O0561 | Counsel subordinates concerning personal matters | 7 | 46 | -39 |
| R0700 | Research equipment and parts for replacement | 21 | 59 | -38 |
| O0570 | Develop or establish work schedules | 9 | 47 | -38 |
| P0664 | Schedule personnel for training | 5 | 42 | -37 |
| R0689 | Initiate requisitions for equipment, tools, parts, or supplies | 5 | 42 | -37 |
| O0551 | Assign personnel to work areas or duty positions | 11 | 47 | -37 |
| O0604 | Interpret policies, directives, or procedures for subordinates | 9 | 46 | -37 |
| O0603 | Inspect personnel for compliance with military standards | 9 | 46 | -37 |
| O0630 | Write recommendations for awards or decorations | 2 | 39 | -37 |
| O0601 | Initiate actions required due to substandard performance of personnel | 2 | 39 | -37 |
| P0655 | Evaluate progress of trainees | 9 | 45 | -36 |
| O0564 | Determine or establish work assignments or priorities | 14 | 50 | -36 |

TABLE 13

REPRESENTATIVE TASKS PERFORMED BY AD DAFSC 3E472 PERSONNEL

| TASKS | | PERCENT MEMBERS PERFORMING (N=35) |
|---|---|---|
| O0603 | Inspect personnel for compliance with military standards | 91 |
| O0630 | Write recommendations for awards or decorations | 91 |
| O0606 | Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting | 89 |
| P0635 | Attend Prime Base Engineering Emergency Force (BEEF) training | 86 |
| O0559 | Conduct supervisory performance feedback sessions | 86 |
| O0561 | Counsel subordinates concerning personal matters | 86 |
| O0592 | Evaluate personnel for compliance with performance standards | 83 |
| O0593 | Evaluate personnel for promotion, demotion, reclassification, or special awards | 83 |
| O0560 | Coordinate maintenance of liquid fuel systems, other than tank cleaning, with appropriate agencies | 83 |
| O0625 | Schedule work assignments or priorities | 83 |
| O0562 | Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace | 83 |
| O0551 | Assign personnel to work areas or duty positions | 83 |
| O0595 | Evaluate safety or security programs | 80 |
| P0645 | Determine training requirements | 80 |
| O0604 | Interpret policies, directives, or procedures for subordinates | 80 |
| O0564 | Determine or establish work assignments or priorities | 80 |
| P0644 | Counsel trainees on training progress | 80 |
| P0643 | Conduct on-the-job training (OJT) | 80 |
| P0654 | Evaluate personnel to determine training needs | 80 |
| O0558 | Conduct supervisory orientations for newly assigned personnel | 80 |
| O0596 | Evaluate work schedules | 77 |
| B0071 | Interpret as-built drawings | 77 |
| O0572 | Direct training activities | 77 |
| O0601 | Initiate actions required due to substandard performance of personnel | 77 |
| P0655 | Evaluate progress of trainees | 77 |
| O0570 | Develop or establish work schedules | 77 |
| H0280 | Interpret mechanical schematics | 77 |
| O0585 | Evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) program | 74 |
| O0571 | Direct administrative activities | 74 |
| O0629 | Write performance reports or supervisory appraisals | 74 |
| P0661 | Plan or schedule training | 74 |
| O0556 | Conduct self-inspections or self-assessments | 74 |
| O0553 | Attend military construction (MILCON) project progress meetings | 74 |
| P0664 | Schedule personnel for training | 74 |
| O0598 | Evaluate maintenance or utilization of equipment, tools, parts, supplies, or workspace | 74 |
| O0580 | Establish performance standards for subordinates | 74 |
| N0501 | Don or doff chemical warfare personal protective clothing | 71 |
| O0582 | Evaluate accident or incident reports | 71 |

* Average Number of Tasks Performed - 282

TABLE 14

TASKS WHICH BEST DIFFERENTIATE BETWEEN AD DAFSC 3E452 AND DAFSC 3E472 PERSONNEL
(PERCENT MEMBERS PERFORMING)

| TASKS | | 3E452 (N=74) | 3E472 (N=35) | DIFFERENCE |
|---|---|---|---|---|
| A0005 | Clean work areas | 97 | 66 | 32 |
| F0234 | Operationally inspect check valves | 77 | 46 | 31 |
| L0396 | Clean electrical contacts | 53 | 23 | 30 |
| A0039 | Replace service station fuel hoses | 92 | 63 | 29 |
| A0003 | Clean hand tools | 95 | 66 | 29 |
| J0378 | Replace hose protectors | 57 | 29 | 28 |
| A0025 | Install or remove strainer screens | 78 | 51 | 27 |
| F0229 | Adjust packing glands on manual valves | 81 | 54 | 27 |
| N0503 | Fill sandbags | 58 | 31 | 27 |
| M0432 | Construct berms or dikes | 35 | 9 | 27 |
| A0001 | Bend copper tubing | 74 | 49 | 26 |
| A0028 | Operationally inspect filter separators | 82 | 57 | 25 |
| J0357 | Inspect hose connections | 88 | 63 | 25 |
| J0356 | Hydrostatically pressure-test hoses | 47 | 23 | 24 |
| I0341 | Replace service station nozzles | 84 | 60 | 24 |
| O0630 | Write recommendations for awards or decorations | 39 | 91 | -52 |
| O0631 | Write replies to inspection reports | 19 | 69 | -50 |
| O0593 | Evaluate personnel for promotion, demotion, reclassification, or special awards | 32 | 83 | -50 |
| O0628 | Write job or position descriptions | 18 | 66 | -48 |
| O0602 | Initiate personnel action requests | 20 | 69 | -48 |
| O0623 | Schedule personnel for temporary duty (TDY) assignments, leaves, or passes | 30 | 77 | -47 |
| O0553 | Attend military construction (MILCON) project progress meetings | 30 | 74 | -45 |
| O0607 | Perform final acceptance of MILCON projects | 12 | 57 | -45 |
| P0662 | Prepare job qualification standards (JQSs) | 15 | 60 | -45 |
| O0559 | Conduct supervisory performance feedback sessions | 41 | 86 | -45 |
| O0603 | Inspect personnel for compliance with military standards | 46 | 91 | -45 |
| O0595 | Evaluate safety or security programs | 36 | 80 | -44 |
| P0645 | Determine training requirements | 36 | 80 | -44 |
| O0574 | Draft budget requirements | 14 | 57 | -44 |

## ANG Skill-Level Descriptions

As of July 1999, a total of 201 ANG members were assigned to AFSC 3E4X2. A total of 182 disks were mailed to ANG personnel with 53 disks returned. The ANG sample is comprised of 34 members. A total of 19 disks could not be used.

Table 15 displays the distribution of skill-level groups for the ANG survey sample across the career ladder jobs and clusters. This table shows that majority of the 5-skill level members are identified within the General Maintenance Cluster while most of the ANG 7-skill level members perform tasks associated with the Liquid Fuel Systems Maintenance Cluster.

**DAFSC 3E452** The 13 members of this group perform an average of 142 tasks which is the lowest average for the three service component 5-skill level members. Table 16 provides a comparison of the relative time spent on duties at the 5-skill level and shows that almost 88 percent of their relative time is spent performing the technical tasks of Duties A through N. This table also shows that ANG DAFSC 3E452 personnel spend 23 percent of their time performing general LFM tasks (Duty A) and 12 percent of their time performing mobility and contingency tasks (Duty N).

Table 17 lists representative tasks performed by these ANG DAFSC 3E452 personnel while Table 20 shows the relative percent time spent on the survey duty areas for DAFSC 3E452 members for all three service components. The ANG 5 skill-level members spend 12 percent more time performing Prime BEEF activities (Duty M) and mobility and contingency activities (Duty N) than their AD 5-skill level peers.

**DAFSC 3E472** These 20 members perform an average of 142 tasks and represent 9 percent of the total survey sample. Table 16 reflects the percent time spent on duties by ANG DAFSC 3E472 members and shows decreases in the amount of time spent by members performing the tasks in 8 of the 14 technical duty areas compared to the ANG 5-skill level personnel. The 7-skill level members spend more of their time maintaining fuel systems (Duty D) and maintaining automatic valves and components (Duty E) compared to the ANG 5-skill level members. Twenty-nine percent of their time is spent on nontechnical tasks involving management and supervision, training, administration, and supply. This is an increase in time spent performing nontechnical tasks of almost 17 percent compared to the ANG 5-skill level members.

Representative tasks performed by ANG 7-skill level members are reflected in Table 18. Table 19 shows tasks that best differentiate between ANG 5- and 7-skill levels. This table clearly shows much more time being spent on specific technical tasks, such as draining fuel storage tanks and draining pipelines, at the 5-skill level. The ANG DAFSC 3E472 members, like their AD counterparts, spend more time than the 5-skill level members performing certain management and supervisory tasks, but they also spend more time performing several technical tasks, including adjusting rate-of-flow controls and inspecting automatic valve main valve bodies.

Table 21 displays the relative time spent on the duty areas for DAFSC 3E472 members by service component. The most significant difference between the tasks performed by ANG 7-skill level members and the AD 7-skill level members is the amount of time spent performing general LFM tasks. The ANG DAFSC 3E472 members spend 23 percent of their time performing general LFM tasks while the AD DAFSC 3E472 members spend 12 percent of their time on similar activities. As a result, the AD members spend more relative time than the ANG members performing specific LFM maintenance, such as maintaining automatic valves and components (Duty E) and service station pump assemblies (Duty I).

## ANG Skill-Level Analysis Summary

Progression for ANG members in the Liquid Fuel Systems Maintenance career ladder follows a normal pattern with a concentration on technical tasks at the 5-skill level and an increase in the performance of management and supervisory, training, administrative, and supply activities at the 7-skill level. The ANG DAFSC 3E4X2 members, however, perform more AFSC-specific technical tasks as they progress through the career ladder compared to the progression for AD members.

TABLE 15

DISTRIBUTION OF ANG DAFSC GROUP MEMBERS ACROSS SPECIALTY JOBS AND CLUSTERS
(PERCENT RESPONDING)

| SPECIALTY JOBS | 3E452 (N=13) | 3E472 (N=20) |
|---|---|---|
| I. LIQUID FUEL SYSTEMS MAINTENANCE CLUSTER | 31 | 40 |
| II. GENERAL MAINTENANCE CLUSTER | 46 | 15 |
| III. RESERVE FORCES READINESS JOB | 8 | 10 |
| IV. MANAGEMENT JOB | 0 | 10 |
| VI. NOT GROUPED | 15 | 25 |

TABLE 16

RELATIVE PERCENT TIME SPENT ON DUTIES BY ANG DAFSC 3E4X2 GROUPS

| DUTIES | | 3E452 (N=13) | 3E472 (N=20) |
|---|---|---|---|
| A | PERFORMING GENERAL MAINTENANCE ACTIVITIES | 23 | 16 |
| B | CLEANING, INSPECTING, OR MAINTAINING FUEL STORAGE TANKS | 8 | 5 |
| C | PERFORMING ENVIRONMENTAL OR SAFETY ACTIVITIES | 7 | 4 |
| D | MAINTAINING FUEL SYSTEMS | 7 | 8 |
| E | MAINTAINING AUTOMATIC VALVES AND COMPONENTS | 4 | 6 |
| F | MAINTAINING MANUAL VALVES AND COMPONENTS | 3 | 3 |
| G | MAINTAINING FUEL PUMPS | 2 | 2 |
| H | MAINTAINING PIPELINES AND PITS | 4 | 3 |
| I | MAINTAINING SERVICE STATION PUMP ASSEMBLIES | 3 | 2 |
| J | MAINTAINING FUEL LOADING OR OFF-LOADING EQUIPMENT | 3 | 2 |
| K | PERFORMING FUEL SYSTEMS DEACTIVATION OR DECOMMISSIONING ACTIVITIES | 2 | 1 |
| L | PERFORMING ELECTRICAL ACTIVITIES | 2 | 2 |
| M | PERFORMING PRIME BASE ENGINEER EMERGENCY FORCE (BEEF) ACTIVITIES | 7 | 5 |
| N | PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES | 12 | 12 |
| O | PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES | 4 | 17 |
| P | PERFORMING TRAINING ACTIVITIES | 6 | 8 |
| Q | PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES | - | 1 |
| R | PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES | 2 | 3 |

" - " indicates less than 1 percent

TABLE 17

REPRESENTATIVE TASKS PERFORMED BY ANG DAFSC 3E452 PERSONNEL

| TASKS | | PERCENT MEMBERS PERFORMING (N=13) |
|---|---|---|
| A0004 | Clean strainer screens | 92 |
| A0008 | Cut gasket materials | 92 |
| A0003 | Clean hand tools | 85 |
| A0024 | Install or remove filter-separator elements | 85 |
| A0018 | Inspect grounding cables, rods, or bonding devices | 77 |
| A0017 | Inspect dikes or dike basins | 77 |
| C0097 | Clean up fuel spills with absorbent materials | 77 |
| A0019 | Inspect loading fuel hoses | 69 |
| N0548 | Tear down, inspect, clean, and reassemble weapons, such as M-16 rifles | 69 |
| A0025 | Install or remove strainer screens | 69 |
| N0535 | Perform self-aid and buddy-care activities | 69 |
| K0385 | Drain filter separators | 69 |
| N0506 | Inspect mobility bags or kits | 69 |
| A0028 | Operationally inspect filter separators | 62 |
| H0305 | Replace flange gaskets | 62 |
| N0505 | Inspect chemical warfare personal protective clothing | 62 |
| A0026 | Manually bleed air off fuel systems | 62 |
| A0015 | Ground portable equipment | 62 |
| A0041 | Thread pipes | 62 |
| E0206 | Install or remove flow clean strainers | 62 |
| C0112 | Inspect fire extinguishers | 54 |
| G0255 | Lubricate pump motors | 54 |
| N0501 | Don or doff chemical warfare personal protective clothing | 54 |
| A0016 | Ground tank cars, trucks, or other vehicles | 54 |
| B0060 | Inspect manhole covers for leaks | 54 |
| A0038 | Replace off-loading fuel hoses | 54 |
| A0014 | Flare copper tubing | 54 |
| A0039 | Replace service station fuel hoses | 54 |
| A0037 | Replace nozzles | 54 |
| D0173 | Join pipes with bolted flanges | 54 |
| A0012 | Cut stencils | 54 |
| A0001 | Bend copper tubing | 54 |
| C0113 | Inspect or maintain portable eye washes | 46 |
| D0186 | Paint identification markings on tanks or pipelines | 46 |
| N0536 | Prepare equipment for deployments | 46 |
| A0020 | Inspect off-loading fuel hoses | 46 |
| N0500 | Dig trenches | 46 |
| R0690 | Inventory equipment, tools, parts, or supplies | 46 |
| D0174 | Join pipes with threaded fittings | 46 |
| M0464 | Operate RRR equipment | 46 |
| J0368 | Operationally inspect truck-fill stands | 46 |
| M0445 | Identify and report suspected unexploded ordnance (UXO) | 46 |
| D0154 | Inspect aboveground tanks | 46 |
| K0387 | Drain pipelines | 46 |

* Average Number of Tasks Performed - 114

TABLE 18

REPRESENTATIVE TASKS PERFORMED BY ANG DAFSC 3E472 PERSONNEL

| TASKS | | PERCENT MEMBERS PERFORMING (N=20) |
|---|---|---|
| A0003 | Clean hand tools | 70 |
| N0548 | Tear down, inspect, clean, and reassemble weapons, such as M-16 rifles | 70 |
| A0041 | Thread pipes | 70 |
| A0008 | Cut gasket materials | 70 |
| A0005 | Clean work areas | 65 |
| A0024 | Install or remove filter-separator elements | 65 |
| A0004 | Clean strainer screens | 65 |
| C0097 | Clean up fuel spills with absorbent materials | 60 |
| A0018 | Inspect grounding cables, rods, or bonding devices | 60 |
| A0028 | Operationally inspect filter separators | 60 |
| A0025 | Install or remove strainer screens | 60 |
| A0015 | Ground portable equipment | 60 |
| A0012 | Cut stencils | 60 |
| N0506 | Inspect mobility bags or kits | 55 |
| O0556 | Conduct self-inspections or self-assessments | 55 |
| O0606 | Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting | 55 |
| A0020 | Inspect off-loading fuel hoses | 55 |
| A0019 | Inspect loading fuel hoses | 55 |
| P0643 | Conduct on-the-job training (OJT) | 55 |
| B0060 | Inspect manhole covers for leaks | 55 |
| D0154 | Inspect aboveground tanks | 55 |
| A0017 | Inspect dikes or dike basins | 55 |
| A0037 | Replace nozzles | 55 |
| N0535 | Perform self-aid and buddy-care activities | 55 |
| A0013 | Fabricate stencils | 55 |
| D0168 | Install or remove pressure gauges | 55 |
| P0659 | Maintain training records or files | 50 |
| N0501 | Don or doff chemical warfare personal protective clothing | 50 |
| O0555 | Conduct safety inspections of equipment or facilities | 50 |
| P0635 | Attend Prime Base Engineering Emergency Force (BEEF) training | 50 |
| O0570 | Develop or establish work schedules | 50 |
| A0032 | Perform corrosion control on exterior metal surfaces | 50 |
| A0001 | Bend copper tubing | 50 |
| A0022 | Install or remove bonding devices | 50 |
| G0256 | Operationally inspect fuel pumps | 50 |
| A0026 | Manually bleed air off fuel systems | 50 |
| R0690 | Inventory equipment, tools, parts, or supplies | 45 |
| O0569 | Develop or establish work methods or procedures | 45 |
| O0561 | Counsel subordinates concerning personal matters | 45 |
| J0368 | Operationally inspect truck-fill stands | 45 |
| M0427 | Assemble AM-2 matting | 45 |

* Average Number of Tasks Performed - 142

TABLE 19

TASKS WHICH BEST DIFFERENTIATE BETWEEN ANG DAFSC 3E452 AND DAFSC 3E472 PERSONNEL
(PERCENT MEMBERS PERFORMING)

| TASKS | | 3E452 (N=13) | 3E472 (N=20) | DIFFERENCE |
|---|---|---|---|---|
| K0386 | Drain fuel storage tanks | 54 | 15 | 39 |
| A0005 | Clean work areas | 100 | 65 | 35 |
| B0044 | Clean tank cleaning equipment | 46 | 15 | 31 |
| A0004 | Clean strainer screens | 92 | 65 | 27 |
| N0505 | Inspect chemical warfare personal protective clothing | 62 | 35 | 27 |
| K0387 | Drain pipelines | 46 | 20 | 26 |
| F0240 | Overhaul globe valves | 46 | 20 | 26 |
| K0385 | Drain filter separators | 69 | 45 | 24 |
| B0088 | Replace manhole covers | 38 | 15 | 23 |
| A0008 | Cut gasket materials | 92 | 70 | 22 |
| A0017 | Inspect dikes or dike basins | 77 | 55 | 22 |
| B0043 | Clean protective clothing or equipment, other than chemical warfare | 46 | 25 | 21 |
| N0500 | Dig trenches | 46 | 25 | 21 |
| O0556 | Conduct self-inspections or self-assessments | 8 | 55 | -47 |
| O0555 | Conduct safety inspections of equipment or facilities | 8 | 50 | -42 |
| O0561 | Counsel subordinates concerning personal matters | 8 | 45 | -37 |
| E0199 | Adjust rate-of-flow controls | 15 | 50 | -35 |
| E0200 | Inspect automatic valve main valve bodies | 15 | 50 | -35 |
| D0167 | Install or remove meter registers or counters | 15 | 50 | -35 |
| O0570 | Develop or establish work schedules | 15 | 50 | -35 |
| D0192 | Repair meter registers or counters | - | 35 | -35 |
| P0643 | Conduct on-the-job training (OJT) | 23 | 55 | -32 |
| D0168 | Install or remove pressure gauges | 23 | 55 | -32 |
| B0071 | Interpret as-built drawings | 8 | 40 | -32 |
| H0308 | Troubleshoot pipeline malfunctions | 8 | 40 | -32 |
| O0551 | Assign personnel to work areas or duty positions | 8 | 40 | -32 |

" - " indicates less than 1 percent

TABLE 20

RELATIVE PERCENT TIME SPENT ON DUTIES BY DAFSC 3E452 GROUPS

| DUTIES | | AD (N=74) | ANG (N=13) | AFRC (N=19) |
|---|---|---|---|---|
| A | PERFORMING GENERAL MAINTENANCE ACTIVITIES | 12 | 23 | 12 |
| B | CLEANING, INSPECTING, OR MAINTAINING FUEL STORAGE TANKS | 8 | 8 | 6 |
| C | PERFORMING ENVIRONMENTAL OR SAFETY ACTIVITIES | 5 | 7 | 3 |
| D | MAINTAINING FUEL SYSTEMS | 8 | 7 | 5 |
| E | MAINTAINING AUTOMATIC VALVES AND COMPONENTS | 8 | 4 | 5 |
| F | MAINTAINING MANUAL VALVES AND COMPONENTS | 4 | 3 | 3 |
| G | MAINTAINING FUEL PUMPS | 3 | 2 | 2 |
| H | MAINTAINING PIPELINES AND PITS | 6 | 4 | 2 |
| I | MAINTAINING SERVICE STATION PUMP ASSEMBLIES | 9 | 3 | 3 |
| J | MAINTAINING FUEL LOADING OR OFF-LOADING EQUIPMENT | 4 | 3 | 2 |
| K | PERFORMING FUEL SYSTEMS DEACTIVATION OR DECOMMISSIONING ACTIVITIES | 2 | 2 | 1 |
| L | PERFORMING ELECTRICAL ACTIVITIES | 4 | 2 | 2 |
| M | PERFORMING PRIME BASE ENGINEER EMERGENCY FORCE (BEEF) ACTIVITIES | 2 | 7 | 12 |
| N | PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES | 5 | 12 | 29 |
| O | PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES | 10 | 4 | 6 |
| P | PERFORMING TRAINING ACTIVITIES | 5 | 6 | 3 |
| Q | PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES | 1 | - | 1 |
| R | PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES | 4 | 2 | 3 |

" - " indicates less than 1 percent

TABLE 21

RELATIVE PERCENT TIME SPENT ON DUTIES BY DAFSC 3E472 GROUPS

| DUTIES | | AD (N=35) | ANG (N=20) | AFRC (N=6) |
|---|---|---|---|---|
| A | PERFORMING GENERAL MAINTENANCE ACTIVITIES | 12 | 23 | 12 |
| B | CLEANING, INSPECTING, OR MAINTAINING FUEL STORAGE TANKS | 8 | 8 | 6 |
| C | PERFORMING ENVIRONMENTAL OR SAFETY ACTIVITIES | 5 | 7 | 3 |
| D | MAINTAINING FUEL SYSTEMS | 8 | 7 | 5 |
| E | MAINTAINING AUTOMATIC VALVES AND COMPONENTS | 8 | 4 | 5 |
| F | MAINTAINING MANUAL VALVES AND COMPONENTS | 4 | 3 | 3 |
| G | MAINTAINING FUEL PUMPS | 3 | 2 | 2 |
| H | MAINTAINING PIPELINES AND PITS | 6 | 4 | 2 |
| I | MAINTAINING SERVICE STATION PUMP ASSEMBLIES | 9 | 3 | 3 |
| J | MAINTAINING FUEL LOADING OR OFF-LOADING EQUIPMENT | 4 | 3 | 2 |
| K | PERFORMING FUEL SYSTEMS DEACTIVATION OR DECOMMISSIONING ACTIVITIES | 2 | 2 | 1 |
| L | PERFORMING ELECTRICAL ACTIVITIES | 4 | 2 | 2 |
| M | PERFORMING PRIME BASE ENGINEER EMERGENCY FORCE (BEEF) ACTIVITIES | 2 | 7 | 12 |
| N | PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES | 5 | 12 | 29 |
| O | PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES | 10 | 4 | 6 |
| P | PERFORMING TRAINING ACTIVITIES | 5 | 6 | 3 |
| Q | PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES | 1 | - | 1 |
| R | PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES | 4 | 2 | 3 |

" - " indicates less than 1 percent

## AFRC Skill-Level Descriptions

As of July 1999, a total of 83 AFRC members were assigned to AFSC 3E4X2. A total of 68 disks were mailed to AFRC personnel with 34 disks returned. Out of the 34 returned disks, a total of 9 disks could not be used. As a result, the AFRC sample is comprised of 25 members.

The distribution of skill-level groups for the AFRC survey sample across the career ladder jobs and clusters is displayed in Table 22. This table shows a fairly even distribution of the 5-skill level members within the Liquid Fuel Systems Maintenance Cluster and the Reserve Forces Job. One-third of the AFRC 7-skill level members are in the Liquid Fuel Systems Maintenance Cluster with another 33 percent in the Management Job.

**DAFSC 3E452** The 19 members of this group account for 8 percent of the total survey sample. Table 23 provides a comparison of the relative time spent on duties at the 5-skill level and reveals that the AFRC DAFSC 3E452 members are spending 29 percent of their time performing mobility and contingency activities (Duty N). Eighty-seven percent of their time is spent performing technical tasks.

Table 24 lists some of the 135 tasks performed on average by the highest percentage of AFRC DAFSC 3E452 personnel. Table 20 reveals that compared to their AD peers, the AFRC 5-skill level members spend less relative time performing the technical tasks in 11 of the 14 technical duty areas. The AFRC personnel spend 24 percent more time performing mobility and contingency activities than the AD 5-skill level members and 17 percent more time on those activities than the ANG 5-skill level members.

**DAFSC 3E472** These 6 members perform an average of 190 tasks. Table 23 reflects the percent time spent on duties by AFRC DAFSC 3E472 members and a pattern very similar to the time spent by AFRC 5-skill level members. The AFRC 7-skill levels spend more time than the 5-skill level members performing general LFM tasks (Duty A), maintaining service station pump assemblies (Duty I), performing fuel systems deactivation or decommissioning activities (Duty K), and performing electrical activities (Duty L). The AFRC 7-skill level members also spend 37 percent of their time performing management and supervisory, training, administrative, and supply activities. This is an increase in time spent performing nontechnical tasks of 24 percent compared to the AFRC 5-skill level members.

Representative tasks performed by AFRC 7-skill level members are reflected in Table 25. Table 26 reflects tasks which best differentiate between 5- and 7-skill levels. The AFRC 5-skill level members are performing many technical LFM tasks and mobility and contingency tasks performed by a much smaller percentage of AFRC 7-skill level members, such as performing explosive ordnance reconnaissance, refueling tent heaters, and repairing or replacing manual valves, other than check valves. Table 26 also clearly shows a significantly higher devotion to management, supervisory, and training activities at the 7-skill level than the 5-skill level.

Table 21 shows that compared to the ANG 7-skill level members, the AFRC 7-skill level members spend slightly more time maintaining service station pump assemblies (Duty I),

performing fuel systems deactivation or decommissioning activities (Duty K), performing electrical activities (Duty L), and performing Prime BEEF activities (Duty M). The AFRC 7-skill level members also spend 8 percent more time than their ANG counterparts on the nontechnical tasks in the survey. The AFRC 7-skill level members spend less time performing maintenance on specific liquid fuel systems compared to the AD 7-skill level members while the same AFRC members spend four times as much of their relative time performing Prime BEEF, mobility, and contingency activities.

## AFRC Skill-Level Analysis Summary

Career ladder progression for AFRC members in DAFSC 3E4X2 follows a regular pattern. The 5-skill levels spend 87 percent of their time performing technical tasks versus 63 percent of the time spent on similar technical tasks at the 7-skill level. The distinction between the tasks performed by the two skill levels is greater among the AFRC members compared to the distinction between the same skill levels within the AD and ANG components. The AFRC DAFSC 3E472 members are performing a large number of management, supervisory, and training tasks that are being performed by a much smaller number of 5-skill level members.

TABLE 22

DISTRIBUTION OF AFRC DAFSC GROUP MEMBERS ACROSS SPECIALTY JOBS AND CLUSTERS
(PERCENT RESPONDING)

| SPECIALTY JOBS | 3E452 (N=19) | 3E472 (N=6) |
|---|---|---|
| I. LIQUID FUEL SYSTEMS MAINTENANCE CLUSTER | 42 | 34 |
| II. GENERAL MAINTENANCE CLUSTER | 11 | 0 |
| III. RESERVE FORCES READINESS JOB | 36 | 0 |
| IV. MANAGEMENT JOB | 0 | 33 |
| VI. NOT GROUPED | 11 | 33 |

TABLE 23

RELATIVE PERCENT TIME SPENT ON DUTIES BY AFRC DAFSC 3E4X2 GROUPS

| DUTIES | | 3E452 (N=19) | 3E472 (N=6) |
|---|---|---|---|
| A | PERFORMING GENERAL MAINTENANCE ACTIVITIES | 12 | 15 |
| B | CLEANING, INSPECTING, OR MAINTAINING FUEL STORAGE TANKS | 6 | 4 |
| C | PERFORMING ENVIRONMENTAL OR SAFETY ACTIVITIES | 3 | 3 |
| D | MAINTAINING FUEL SYSTEMS | 5 | 3 |
| E | MAINTAINING AUTOMATIC VALVES AND COMPONENTS | 5 | 2 |
| F | MAINTAINING MANUAL VALVES AND COMPONENTS | 3 | 1 |
| G | MAINTAINING FUEL PUMPS | 2 | 1 |
| H | MAINTAINING PIPELINES AND PITS | 2 | 3 |
| I | MAINTAINING SERVICE STATION PUMP ASSEMBLIES | 3 | 4 |
| J | MAINTAINING FUEL LOADING OR OFF-LOADING EQUIPMENT | 2 | 2 |
| K | PERFORMING FUEL SYSTEMS DEACTIVATION OR DECOMMISSIONING ACTIVITIES | 1 | 2 |
| L | PERFORMING ELECTRICAL ACTIVITIES | 2 | 3 |
| M | PERFORMING PRIME BASE ENGINEER EMERGENCY FORCE (BEEF) ACTIVITIES | 12 | 9 |
| N | PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES | 29 | 11 |
| O | PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES | 6 | 24 |
| P | PERFORMING TRAINING ACTIVITIES | 3 | 8 |
| Q | PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES | 1 | 1 |
| R | PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES | 3 | 4 |

" - " indicates less than 1 percent

TABLE 24

REPRESENTATIVE TASKS PERFORMED BY AFRC DAFSC 3E452 PERSONNEL

| TASKS | | PERCENT MEMBERS PERFORMING (N=19) |
|---|---|---|
| N0548 | Tear down, inspect, clean, and reassemble weapons, such as M-16 rifles | 84 |
| N0526 | Perform chemical warfare agent decontamination procedures | 84 |
| A0005 | Clean work areas | 84 |
| A0003 | Clean hand tools | 84 |
| N0505 | Inspect chemical warfare personal protective clothing | 79 |
| N0525 | Perform camp security | 79 |
| N0535 | Perform self-aid and buddy-care activities | 79 |
| N0524 | Perform camouflage procedures | 79 |
| A0008 | Cut gasket materials | 79 |
| N0501 | Don or doff chemical warfare personal protective clothing | 74 |
| N0504 | Identify chemical warfare agents | 74 |
| N0529 | Perform explosive ordnance reconnaissance | 74 |
| N0527 | Perform cover and concealment techniques for work party security | 74 |
| A0014 | Flare copper tubing | 74 |
| N0506 | Inspect mobility bags or kits | 68 |
| N0523 | Participate in convoy exercises | 68 |
| N0503 | Fill sandbags | 68 |
| M0454 | Lay AM-2 matting | 68 |
| M0445 | Identify and report suspected unexploded ordnance (UXO) | 68 |
| N0534 | Perform RRRs | 63 |
| A0041 | Thread pipes | 63 |
| C0097 | Clean up fuel spills with absorbent materials | 63 |
| A0007 | Cut copper tubing | 63 |
| A0001 | Bend copper tubing | 63 |
| N0536 | Prepare equipment for deployments | 58 |
| A0009 | Cut pipes with hand tools | 58 |
| M0447 | Inspect and report base damages | 58 |
| A0015 | Ground portable equipment | 58 |
| A0017 | Inspect dikes or dike basins | 58 |
| A0024 | Install or remove filter-separator elements | 58 |
| E0206 | Install or remove flow clean strainers | 58 |
| M0480 | Set up or tear down bare base structures | 53 |
| N0540 | Refuel tent heaters | 53 |
| N0531 | Perform or set up site security | 53 |
| R0690 | Inventory equipment, tools, parts, or supplies | 53 |
| N0530 | Perform hardened facility activities | 53 |
| M0436 | Construct field latrines | 53 |
| M0427 | Assemble AM-2 matting | 53 |
| M0437 | Construct field utility systems | 53 |
| A0037 | Replace nozzles | 53 |
| N0484 | Assemble rapid utility repair kits, such as RURK Is or RURK IIs | 53 |
| A0004 | Clean strainer screens | 53 |

* Average Number of Tasks Performed - 135

TABLE 25

REPRESENTATIVE TASKS PERFORMED BY AFRC DAFSC 3E472 PERSONNEL

| TASKS | | PERCENT MEMBERS PERFORMING (N=6) |
|---|---|---|
| O0570 | Develop or establish work schedules | 83 |
| O0554 | Conduct general meetings, such as staff meetings, briefings, conferences, or workshops | 83 |
| O0629 | Write performance reports or supervisory appraisals | 83 |
| O0572 | Direct training activities | 83 |
| A0015 | Ground portable equipment | 83 |
| O0569 | Develop or establish work methods or procedures | 83 |
| A0024 | Install or remove filter-separator elements | 83 |
| A0018 | Inspect grounding cables, rods, or bonding devices | 83 |
| A0005 | Clean work areas | 83 |
| A0025 | Install or remove strainer screens | 83 |
| N0506 | Inspect mobility bags or kits | 83 |
| A0021 | Inspect product recovery systems | 83 |
| N0535 | Perform self-aid and buddy-care activities | 83 |
| A0004 | Clean strainer screens | 83 |
| N0548 | Tear down, inspect, clean, and reassemble weapons, such as M-16 rifles | 83 |
| C0112 | Inspect fire extinguishers | 83 |
| N0503 | Fill sandbags | 83 |
| R0689 | Initiate requisitions for equipment, tools, parts, or supplies | 67 |
| O0559 | Conduct supervisory performance feedback sessions | 67 |
| O0558 | Conduct supervisory orientations for newly assigned personnel | 67 |
| O0551 | Assign personnel to work areas or duty positions | 67 |
| O0561 | Counsel subordinates concerning personal matters | 67 |
| P0645 | Determine training requirements | 67 |
| P0654 | Evaluate personnel to determine training needs | 67 |
| P0644 | Counsel trainees on training progress | 67 |
| O0564 | Determine or establish work assignments or priorities | 67 |
| O0606 | Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting | 67 |
| P0655 | Evaluate progress of trainees | 67 |
| O0604 | Interpret policies, directives, or procedures for subordinates | 67 |
| P0643 | Conduct on-the-job training (OJT) | 67 |
| O0580 | Establish performance standards for subordinates | 67 |
| O0555 | Conduct safety inspections of equipment or facilities | 67 |
| O0581 | Establish procedures for accountability of equipment, tools, parts, or supplies | 67 |
| A0037 | Replace nozzles | 67 |
| A0028 | Operationally inspect filter separators | 67 |
| O0603 | Inspect personnel for compliance with military standards | 67 |
| P0636 | Attend skill-level upgrade training | 67 |
| A0003 | Clean hand tools | 67 |
| N0534 | Perform RRRs | 67 |
| A0008 | Cut gasket materials | 67 |
| M0454 | Lay AM-2 matting | 67 |
| A0017 | Inspect dikes or dike basins | 67 |

* Average Number of Tasks Performed - 190

TABLE 26

TASKS WHICH BEST DIFFERENTIATE BETWEEN AFRC DAFSC 3E452 AND DAFSC 3E472 PERSONNEL
(PERCENT MEMBERS PERFORMING)

| TASKS | | 3E452 (N=19) | 3E472 (N=6) | DIFFERENCE |
|---|---|---|---|---|
| N0529 | Perform explosive ordnance reconnaissance | 74 | 33 | 40 |
| A0002 | Bend stainless steel tubing | 37 | - | 37 |
| N0540 | Refuel tent heaters | 53 | 17 | 36 |
| E0213 | Repair or replace dead man controls | 32 | - | 32 |
| F0243 | Repair or replace manual valves, other than check valves | 47 | 17 | 31 |
| A0007 | Cut copper tubing | 63 | 33 | 30 |
| A0001 | Bend copper tubing | 63 | 33 | 30 |
| N0524 | Perform camouflage procedures | 79 | 50 | 29 |
| N0525 | Perform camp security | 79 | 50 | 29 |
| E0218 | Repair or replace powertrols | 26 | - | 26 |
| E0226 | Repair or replace VPIs | 26 | - | 26 |
| L0408 | Perform amperage tests | 26 | - | 26 |
| O0572 | Direct training activities | 5 | 83 | -78 |
| O0629 | Write performance reports or supervisory appraisals | 11 | 83 | -73 |
| O0570 | Develop or establish work schedules | 11 | 83 | -73 |
| O0569 | Develop or establish work methods or procedures | 11 | 83 | -73 |
| O0554 | Conduct general meetings, such as staff meetings, briefings, conferences, or workshops | 21 | 83 | -62 |
| O0566 | Develop organizational or functional charts | 5 | 67 | -61 |
| A0021 | Inspect product recovery systems | 26 | 83 | -57 |
| P0654 | Evaluate personnel to determine training needs | 11 | 67 | -56 |
| P0645 | Determine training requirements | 11 | 67 | -56 |
| P0644 | Counsel trainees on training progress | 11 | 67 | -56 |
| R0689 | Initiate requisitions for equipment, tools, parts, or supplies | 11 | 67 | -56 |
| O0604 | Interpret policies, directives, or procedures for subordinates | 11 | 67 | -56 |
| P0655 | Evaluate progress of trainees | 11 | 67 | -56 |

" - " indicates less than 1 percent

## Comparative Analysis of DAFSC Groups

As discussed in their respective sections, AD, ANG, and AFRC DAFSC groups were examined and reported separately. A common theme became evident across all DAFSC groups, however, in that typical career ladder progression is evident across all three service components. At the 5-skill level across all component groups, members are performing mostly technical tasks. The 7-skill level groups expanded their workload to include supervisory, management, and training tasks as they are responsible for the day-today management of LFM activities.

Further analysis of the DAFSC groups for the three service components revealed that the AD members of this career ladder spend slightly more time performing management and supervisory tasks at the 5- and 7-skill levels than the AFRC members do. The distinction between the time spent performing management and supervisory activities at the 5-skill level and 7-skill level is greater between the AD and ANG members. In addition, the AD members perform a larger number of tasks with the AD 5-skill levels averaging over twice as many tasks as the ANG and AFRC 5-skill levels. The AD DAFSC 3E472 members also perform many more tasks than the ANG and AFRC 7-skill level members although the difference is not as significant. The most noticeable difference in task performance between the three components within the technical areas is in the time spent performing Prime BEEF, mobility, and contingency activities. The AFRC members devote much more time to these specific areas than their AD and ANG counterparts.

## TRAINING ANALYSIS

Occupational survey data are one of many sources of information that can be used to assist in the development of a training program relevant to the needs of personnel in their first enlistment. Factors which may be used in evaluating training include the overall description of the work being performed by first-job or first-enlistment personnel and their overall distribution across career ladder jobs, percentages of first-job (1–24 months' TAFMS) or first-enlistment (1–48 months' TAFMS) members performing specific tasks, as well as TE and TD ratings (previously explained in the **SURVEY METHODOLOGY** section).

### First-Job Personnel

This study has 25 members in their first-job assignment (1–24 months' TAFMS), representing 11 percent of the survey sample. Table 27 displays the relative time spent on duties by first-job personnel. As seen in this table, first-job personnel spend 17 percent of their time performing the general LFM tasks (Duty A) and 11 percent of their time maintaining fuel systems (Duty D). They also spend 11 percent of their time maintaining automatic valves and components (Duty E). Table 28 lists representative tasks performed by these first-job personnel and reflects the technical nature of the job these newly assigned personnel perform.

### First-Enlistment Personnel

The 67 members in their first-enlistment represent 30 percent of the total survey sample. Figure 2 reflects the distribution of first-enlistment personnel within the career ladder. Table 29 displays the relative percent of time spent on duties by first-enlistment personnel. These personnel spend 15 percent of their time performing the general LFM tasks of Duty A and 11 percent of their time maintaining fuel systems of Duty D. Representative tasks performed by first-enlistment personnel are displayed in Table 30. Table 31 reflects the equipment or vehicles operated or maintained by more than 60 percent of the first-enlistment respondents.

TABLE 27

RELATIVE PERCENT TIME SPENT ON DUTIES BY FIRST-JOB PERSONNEL (1–24 MONTHS' TAFMS) (N=25)

| | DUTIES | PERCENT TIME SPENT |
|---|---|---|
| A | PERFORMING GENERAL MAINTENANCE ACTIVITIES | 17 |
| B | CLEANING, INSPECTING, OR MAINTAINING FUEL STORAGE TANKS | 7 |
| C | PERFORMING ENVIRONMENTAL OR SAFETY ACTIVITIES | 4 |
| D | MAINTAINING FUEL SYSTEMS | 11 |
| E | MAINTAINING AUTOMATIC VALVES AND COMPONENTS | 11 |
| F | MAINTAINING MANUAL VALVES AND COMPONENTS | 4 |
| G | MAINTAINING FUEL PUMPS | 3 |
| H | MAINTAINING PIPELINES AND PITS | 7 |
| I | MAINTAINING SERVICE STATION PUMP ASSEMBLIES | 8 |
| J | MAINTAINING FUEL LOADING OR OFF-LOADING EQUIPMENT | 5 |
| K | PERFORMING FUEL SYSTEMS DEACTIVATION OR DECOMMISSIONING ACTIVITIES | 5 |
| L | PERFORMING ELECTRICAL ACTIVITIES | 5 |
| M | PERFORMING PRIME BASE ENGINEER EMERGENCY FORCE (BEEF) ACTIVITIES | 3 |
| N | PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES | 6 |
| O | PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES | 1 |
| P | PERFORMING TRAINING ACTIVITIES | - |
| Q | PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES | - |
| R | PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES | 2 |

" - " indicates less than 1 percent

TABLE 28

REPRESENTATIVE TASKS PERFORMED BY AFSC 3E4X2
FIRST-JOB PERSONNEL (1–24 MONTHS' TAFMS)

| TASKS | | PERCENT MEMBERS PERFORMING (N=25) |
|---|---|---|
| K0385 | Drain filter separators | 100 |
| A0024 | Install or remove filter-separator elements | 100 |
| A0005 | Clean work areas | 96 |
| C0097 | Clean up fuel spills with absorbent materials | 96 |
| A0003 | Clean hand tools | 96 |
| A0008 | Cut gasket materials | 96 |
| A0037 | Replace nozzles | 92 |
| L0411 | Perform tag-out or lock-out procedures | 88 |
| A0039 | Replace service station fuel hoses | 88 |
| A0026 | Manually bleed air off fuel systems | 88 |
| A0041 | Thread pipes | 88 |
| K0387 | Drain pipelines | 88 |
| E0228 | Troubleshoot automatic valves | 84 |
| D0174 | Join pipes with threaded fittings | 84 |
| K0379 | Blind flange open pipelines | 84 |
| F0229 | Adjust packing glands on manual valves | 84 |
| I0341 | Replace service station nozzles | 80 |
| D0173 | Join pipes with bolted flanges | 80 |
| A0009 | Cut pipes with hand tools | 80 |
| E0223 | Repair or replace solenoids | 80 |
| A0015 | Ground portable equipment | 76 |
| D0168 | Install or remove pressure gauges | 76 |
| J0357 | Inspect hose connections | 76 |
| I0345 | Replace service station pump hoses | 76 |
| A0028 | Operationally inspect filter separators | 76 |
| K0386 | Drain fuel storage tanks | 76 |
| E0217 | Repair or replace opening or closing speed control components | 76 |
| E0227 | Replace diaphragms | 76 |
| A0025 | Install or remove strainer screens | 76 |
| A0014 | Flare copper tubing | 76 |
| A0040 | Test vapor levels in enclosed areas | 76 |
| A0031 | Operationally inspect product recovery systems | 76 |
| A0007 | Cut copper tubing | 76 |
| F0243 | Repair or replace manual valves, other than check valves | 76 |
| E0199 | Adjust rate-of-flow controls | 72 |
| E0196 | Adjust opening or closing speed controls | 72 |
| I0319 | Operationally inspect service station pumps | 72 |
| E0200 | Inspect automatic valve main valve bodies | 72 |
| E0209 | Repair or replace auxiliary check valves | 72 |
| J0362 | Install or remove quick disconnect couplings, such as kam-lock or drybreak | 68 |

* Average Number of Tasks Performed – 201

## DISTRIBUTION OF 3E4X2 FIRST-ENLISTMENT PERSONNEL ACROSS SPECIALTY JOBS AND CLUSTERS (N = 67)

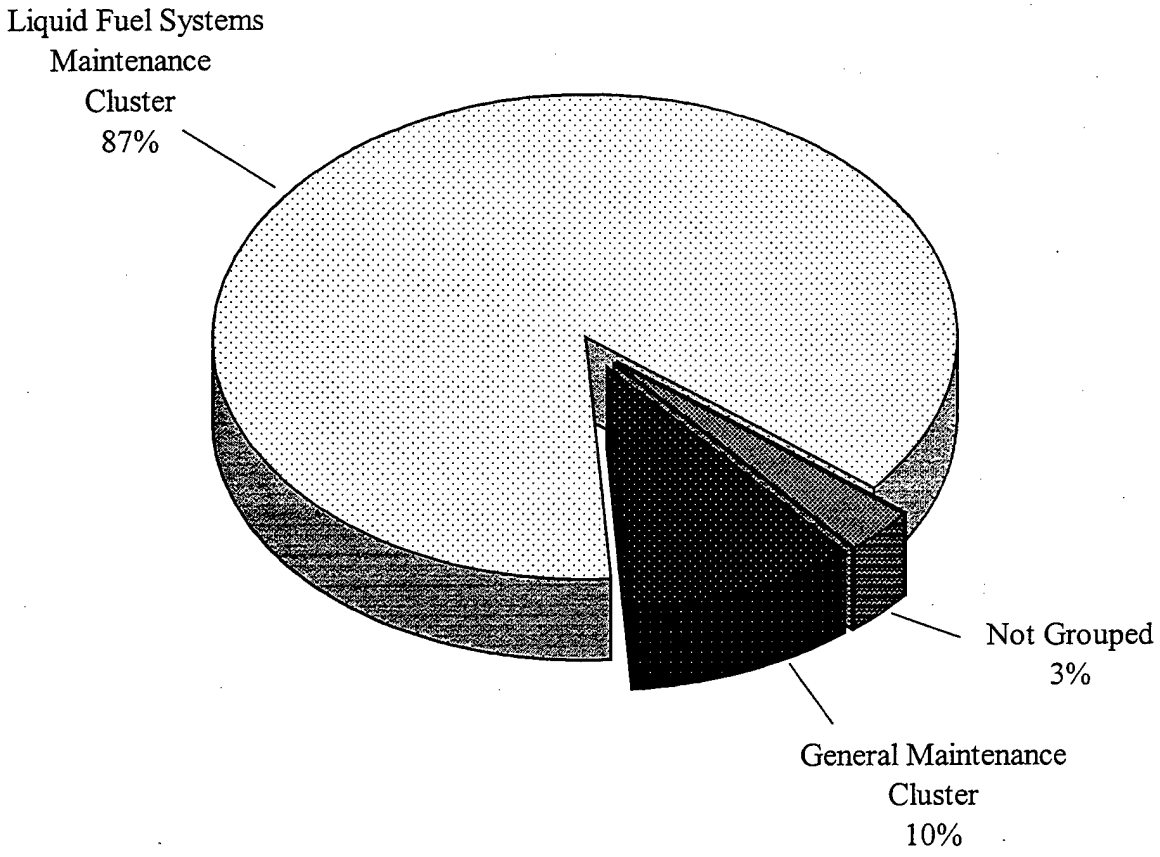


**FIGURE 2**

TABLE 29

RELATIVE PERCENT TIME SPENT ON DUTIES BY FIRST-ENLISTMENT PERSONNEL (N=67)

| | DUTIES | PERCENT TIME SPENT |
|---|---|---|
| A | PERFORMING GENERAL MAINTENANCE ACTIVITIES | 15 |
| B | CLEANING, INSPECTING, OR MAINTAINING FUEL STORAGE TANKS | 8 |
| C | PERFORMING ENVIRONMENTAL OR SAFETY ACTIVITIES | 5 |
| D | MAINTAINING FUEL SYSTEMS | 11 |
| E | MAINTAINING AUTOMATIC VALVES AND COMPONENTS | 10 |
| F | MAINTAINING MANUAL VALVES AND COMPONENTS | 4 |
| G | MAINTAINING FUEL PUMPS | 3 |
| H | MAINTAINING PIPELINES AND PITS | 7 |
| I | MAINTAINING SERVICE STATION PUMP ASSEMBLIES | 9 |
| J | MAINTAINING FUEL LOADING OR OFF-LOADING EQUIPMENT | 5 |
| K | PERFORMING FUEL SYSTEMS DEACTIVATION OR DECOMMISSIONING ACTIVITIES | 4 |
| L | PERFORMING ELECTRICAL ACTIVITIES | 4 |
| M | PERFORMING PRIME BASE ENGINEER EMERGENCY FORCE (BEEF) ACTIVITIES | 3 |
| N | PERFORMING MOBILITY AND CONTINGENCY ACTIVITIES | 6 |
| O | PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES | 2 |
| P | PERFORMING TRAINING ACTIVITIES | 1 |
| Q | PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES | - |
| R | PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES | 2 |

" - " indicates less than 1 percent

TABLE 30

REPRESENTATIVE TASKS PERFORMED BY AFSC 3E4X2
FIRST-ENLISTMENT PERSONNEL

| TASKS | | PERCENT MEMBERS PERFORMING (N=67) |
|---|---|---|
| A0005 | Clean work areas | 97 |
| A0024 | Install or remove filter-separator elements | 97 |
| C0097 | Clean up fuel spills with absorbent materials | 97 |
| A0003 | Clean hand tools | 97 |
| A0008 | Cut gasket materials | 97 |
| A0037 | Replace nozzles | 96 |
| A0039 | Replace service station fuel hoses | 94 |
| A0041 | Thread pipes | 93 |
| K0385 | Drain filter separators | 91 |
| A0026 | Manually bleed air off fuel systems | 91 |
| E0228 | Troubleshoot automatic valves | 88 |
| A0015 | Ground portable equipment | 87 |
| D0173 | Join pipes with bolted flanges | 87 |
| F0229 | Adjust packing glands on manual valves | 87 |
| K0379 | Blind flange open pipelines | 87 |
| I0341 | Replace service station nozzles | 85 |
| D0174 | Join pipes with threaded fittings | 85 |
| K0387 | Drain pipelines | 85 |
| A0028 | Operationally inspect filter separators | 84 |
| I0345 | Replace service station pump hoses | 84 |
| L0411 | Perform tag-out or lock-out procedures | 84 |
| I0313 | Inspect service station fuel hoses | 84 |
| D0168 | Install or remove pressure gauges | 84 |
| A0025 | Install or remove strainer screens | 84 |
| A0009 | Cut pipes with hand tools | 84 |
| E0198 | Adjust pressure-relief controls | 84 |
| J0357 | Inspect hose connections | 82 |
| I0319 | Operationally inspect service station pumps | 82 |
| A0040 | Test vapor levels in enclosed areas | 82 |
| E0227 | Replace diaphragms | 82 |
| E0203 | Inspect valve position indicators (VPIs) | 82 |
| I0316 | Operationally inspect service station dispensers | 81 |
| I0311 | Calibrate service station pump dispensing unit meters | 81 |
| B0054 | Inspect air compressors or hoses | 81 |
| E0199 | Adjust rate-of-flow controls | 81 |
| E0220 | Repair or replace pressure-relief controls | 81 |
| E0200 | Inspect automatic valve main valve bodies | 79 |
| N0535 | Perform self-aid and buddy-care activities | 79 |
| A0021 | Inspect product recovery systems | 79 |

* Average Number of Tasks Performed - 247

TABLE 31

EQUIPMENT OR VEHICLES OPERATED OR MAINTAINED BY FIRST-ENLISTMENT AFSC 3E4X2 PERSONNEL

| EQUIPMENT | 1ST ENL (N=67) |
|---|---|
| Gasket Cutting Kits | 96 |
| Portable Air Compressors | 96 |
| Radios | 96 |
| Hand Pipe Threaders and Cutters | 94 |
| Lubricating Grease Guns | 93 |
| Meters, Master | 93 |
| Prover Cans (5-gallon) | 93 |
| Flange Spreaders | 91 |
| Impact Wrenches | 91 |
| Tube Bending Kits | 88 |
| Fuel Bowsers | 87 |
| Electric Drills | 84 |
| Torque Wrenches | 84 |
| Multimeters | 82 |
| Absorbent Spill Materials | 79 |
| Combustible Gas and Oxygen Indicators | 79 |
| Gauging Tapes | 79 |
| Pumps, Portable Pneumatic | 78 |
| Compressed Air Respirators and Hoses | 75 |
| Coppus Blowers | 75 |
| Grinders | 75 |
| Hydraulic Pressure Gauge Testers | 72 |
| Hand Tools, other than AMCO Nonsparking | 70 |
| Power Pipe Threaders and Cutters | 70 |
| Pneumatic Drills | 69 |
| Compressed Air Tank Regulators | 67 |
| Hand Tools, AMCO Nonsparking | 67 |
| Flare Kits | 66 |
| Flange Jacks | 63 |
| Tripods/Winches | 61 |

## Training Emphasis (TE) and Task Difficulty (TD) Data

TE and TD data are secondary factors that can assist technical school personnel in deciding which tasks should be emphasized in entry-level training. These ratings, based on the judgments of senior career ladder NCOs working at operational units in the field, are collected to provide training personnel with a rank-ordering of those tasks in the JI considered important for first-enlistment personnel training, along with a measure of the difficulty of the JI tasks. When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors (TE and TD), accompanied by moderate to high 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, but this decision must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To assist technical school personnel, AFOMS has developed a computer program that incorporates these secondary factors and the percentage of first-enlistment personnel performing each task to produce an Automated Training Indicator (ATI) for each task. ATIs correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 2, AETCI 36-2601, and allow course personnel to quickly focus their attention on those tasks which are most likely to qualify for initial resident course consideration.

Table 32 presents tasks with the highest TE ratings for AFSC 3E4X2 first-enlistment airmen. For example, this table shows that TE raters reported tasks such as replacing mechanical seals and adjusting rate-of-flow controls require a high degree of training emphasis. In general, tasks covering the maintenance of automatic valves and components are given high TE ratings, and the data indicate that most airmen in their first job and within their first enlistment are performing these tasks.

Table 33 displays those tasks AFSC 3E4X2 raters judged to be the most difficult to learn to perform satisfactorily. This table shows that TD raters reported troubleshooting electrical circuits or components, other than PLC controls, and adjusting or calibrating differential pressure transmitters (DPTs) to be among the most difficult tasks to learn to perform satisfactorily. The TD raters also indicated that tasks such as adjusting programmable logic computer (PLC) batteries and overhauling trirotor pumps to have high task difficulty as well; however, due to the low numbers of first-job and first-enlistment members performing those tasks, they would be inappropriate for inclusion in a resident curriculum and are more appropriately taught as OJT items.

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

## TABLE 32

## TASKS RATED HIGHEST IN TRAINING EMPHASIS

| TASKS | | TNG EMP* | PERCENT MEMBERS PERFORMING 1ST JOB (N=25) | PERCENT MEMBERS PERFORMING 1ST ENL (N =67) | TSK DIF** |
|---|---|---|---|---|---|
| E0228 | Troubleshoot automatic valves | 7.31 | 84 | 88 | 7.27 |
| G0266 | Replace mechanical seals | 7.23 | 72 | 73 | 6.84 |
| E0199 | Adjust rate-of-flow controls | 7.00 | 72 | 81 | 5.48 |
| E0198 | Adjust pressure-relief controls | 7.00 | 68 | 84 | 5.43 |
| H0273 | Hydrostatically pressure-test pipeline systems | 6.92 | 64 | 69 | 5.58 |
| E0197 | Adjust pressure-reducing controls | 6.85 | 60 | 76 | 5.46 |
| E0227 | Replace diaphragms | 6.77 | 76 | 82 | 4.84 |
| G0248 | Adjust deep-well turbine pump impellers | 6.77 | 56 | 55 | 6.24 |
| E0196 | Adjust opening or closing speed controls | 6.77 | 72 | 78 | 5.36 |
| G0250 | Adjust pump coupling alignments | 6.62 | 52 | 54 | 6.39 |
| H0280 | Interpret mechanical schematics | 6.62 | 44 | 58 | 6.29 |
| G0249 | Adjust mechanical seals | 6.54 | 60 | 66 | 6.64 |
| E0207 | Operationally inspect automatic control valves or components | 6.54 | 64 | 76 | 5.28 |
| E0221 | Repair or replace rate-of-flow controls | 6.54 | 68 | 73 | 4.96 |
| E0222 | Repair or replace rotary disc assemblies | 6.54 | 64 | 63 | 5.16 |
| E0220 | Repair or replace pressure-relief controls | 6.54 | 68 | 81 | 4.96 |
| A0040 | Test vapor levels in enclosed areas | 6.54 | 76 | 82 | 5.09 |
| E0219 | Repair or replace pressure-reducing controls | 6.46 | 72 | 79 | 5.05 |
| E0211 | Repair or replace CDHS-2 | 6.46 | 60 | 75 | 5.19 |
| I0311 | Calibrate service station pump dispensing unit meters | 6.46 | 68 | 81 | 5.02 |
| E0195 | Adjust excess flow shutoff controls | 6.46 | 52 | 60 | 5.73 |
| E0216 | Repair or replace excess flow shutoff controls | 6.46 | 56 | 60 | 5.35 |
| E0217 | Repair or replace opening or closing speed control components | 6.38 | 76 | 76 | 4.82 |
| E0218 | Repair or replace powertrols | 6.38 | 56 | 64 | 5.04 |
| E0212 | Repair or replace CDHS-3 | 6.38 | 68 | 75 | 5.18 |
| D0132 | Adjust high-level alarms | 6.38 | 56 | 67 | 6.20 |

* Mean TE Rating is 2.75, and Standard Deviation is 2.37 (High TE = 5.12)

** Average TD Rating is 5.00

TABLE 33

TASKS RATED HIGHEST IN TASK DIFFICULTY

| TASKS | | TSK DIF | PERCENT MEMBERS PERFORMING 1ST JOB (N=25) | 1ST ENL (N=67) | 3-SKL LVL (N=56) | 5-SKL LVL (N=74) | 7-SKL LVL (N=35) | TNG EMP |
|---|---|---|---|---|---|---|---|---|
| L0426 | Troubleshoot electrical circuits or components, other than PLC controls | 7.44 | 20 | 27 | 29 | 27 | 43 | 4.46 |
| D0139 | Adjust or calibrate differential pressure transmitters (DPT) | 7.39 | 36 | 33 | 39 | 22 | 34 | 5.38 |
| E0228 | Troubleshoot automatic valves | 7.27 | 84 | 88 | 88 | 92 | 71 | 7.31 |
| D0136 | Adjust programmable logic computer (PLC) batteries | 7.26 | 12 | 12 | 13 | 7 | 9 | 3.31 |
| D0138 | Adjust or calibrate differential pressure flow switches | 7.25 | 36 | 40 | 43 | 30 | 31 | 5.77 |
| D0194 | Troubleshoot PLC controls | 7.23 | 16 | 19 | 21 | 11 | 29 | 5.00 |
| B0074 | Maintain electronic automatic tank gauges (ATGs), such as ITT Barton | 7.17 | 44 | 33 | 38 | 28 | 31 | 3.69 |
| D0131 | Adjust flow indicators, such as pressure indicator transmitters (PITs) | 7.16 | 36 | 40 | 46 | 30 | 34 | 5.38 |
| L0425 | Rewire electrical motors | 7.10 | 28 | 28 | 27 | 23 | 17 | 3.31 |
| C0130 | Troubleshoot leak detection systems | 7.03 | 20 | 28 | 29 | 31 | 34 | 4.08 |
| I0355 | Troubleshoot VIL assemblies | 6.92 | 20 | 31 | 36 | 24 | 34 | 2.38 |
| L0424 | Review electrical schematics | 6.90 | 28 | 34 | 34 | 38 | 31 | 4.31 |
| G0262 | Repair deep-well turbine pumps | 6.88 | 44 | 54 | 55 | 45 | 51 | 5.08 |
| G0266 | Replace mechanical seals | 6.84 | 72 | 73 | 79 | 68 | 63 | 7.23 |
| B0071 | Interpret as-built drawings | 6.73 | 60 | 63 | 68 | 77 | 77 | 5.69 |
| G0261 | Overhaul trirotor pumps | 6.70 | 4 | 6 | 9 | 4 | 6 | 2.92 |
| G0257 | Overhaul centrifugal pumps | 6.66 | 28 | 40 | 41 | 42 | 43 | 6.31 |
| G0249 | Adjust mechanical seals | 6.64 | 60 | 66 | 71 | 64 | 54 | 6.54 |
| D0161 | Install modification kits on vertical filter separators | 6.59 | 24 | 33 | 34 | 31 | 17 | 2.69 |
| N0496 | Determine cost factors for support agreements | 6.58 | 0 | 0 | 0 | 3 | 9 | .00 |
| N0488 | Complete operations plan (OPLAN) sourcing requirements | 6.57 | 8 | 6 | 7 | 4 | 3 | .00 |
| G0260 | Overhaul rotary-vane pumps | 6.56 | 24 | 36 | 41 | 39 | 40 | 5.54 |
| B0080 | Perform tank cleaning supervisor activities | 6.52 | 0 | 7 | 11 | 39 | 57 | 1.38 |
| G0267 | Replace pump bearings | 6.51 | 44 | 51 | 59 | 46 | 51 | 5.92 |
| G0263 | Repair deep-well turbine ratchets | 6.51 | 8 | 21 | 27 | 16 | 23 | 4.23 |

* Mean TE Rating is 2.75, and Standard Deviation is 2.37 (High TE = 5.12)

** Average TD Rating is 5.00

## Specialty Training Standard (STS)

A comprehensive review of STS 3E4X2, dated April 1997, was performed by comparing STS elements to survey data. Technical school personnel from the 366th Training Squadron, Sheppard AFB TX, matched JI tasks to appropriate STS elements. (The STS elements containing general knowledge information, mandatory entries, subject-matter-knowledge-only requirements, or basic supervisory responsibilities were not examined.) Task knowledge and performance elements of the STS were compared against the standard set forth in AETCI 36-2601 and AFI 36-2623. Typically, STS elements that are matched to tasks with sufficiently high TE and TD ratings and are performed by at least 20 percent of personnel in appropriate skill-level groups, such as first-job (1–24 months' TAFMS) members and 3-skill level members, should be considered for inclusion in the STS. Likewise, elements matched to tasks with less than 20 percent performing in these groups should be considered for deletion from the STS.

All 3E4X2 STS elements matched to JI tasks are well supported by occupational survey data. Table 34 lists examples of tasks not referenced to STS elements with 20 percent or more first-job, first-enlistment, or 3-skill level members performing. The majority of these tasks have high percent members performing, high TE ratings, and average TD ratings. Tasks not referenced to any element of the STS are listed at the end of the STS computer listing of the Training Extract. Training personnel should review these tasks for possible inclusion in the STS.

## Plan of Instruction (POI)

JI tasks were matched to related training objectives in the J3ABR3E432-003 POI, dated 12 April 1999, for the entry-level course with assistance from 366th Training Squadron personnel. The method employed was similar to that of the STS percent members performing data for first-job (1–24 months' TAFMS), first-enlistment (1–48 months' TAFMS), and TE, TD, and ATI ratings.

POI blocks, units of instruction, and learning objectives were compared to the standard criteria set forth in AETCI 36-2601, dated 5 July 1997 (30 percent or more of the first-enlistment group performing tasks trained along with sufficiently high TE and TD ratings on those tasks). Tasks trained in the course that do not meet these criteria should be considered for possible deletion from the course.

The review of tasks matched to the J3ABR3E432-003 POI revealed that the POI is well supported by occupational survey data. Table 35 lists examples of tasks not referenced to the POI with 30 percent or more first-job or first-enlistment members performing. As with the tasks not referenced to the STS, the majority of these tasks have high percent members performing, average or high TE ratings, and average TD ratings. All of the tasks listed also have high ATI ratings. Tasks not referenced to any element of the POI are listed at the end of the POI computer listing of the Training Extract. As with the STS, training personnel should review these tasks for possible inclusion in the POI.

TABLE 34

EXAMPLES OF TASKS NOT REFERENCED TO STS ELEMENTS
WITH 20 PERCENT OR MORE MEMBERS PERFORMING

| TASKS | | TNG EMP | PERCENT MEMBERS PERFORMING 1ST JOB (N=25) | 1ST ENL (N=67) | 3-SKL LVL (N=56) | TASK DIFF | ATI |
|---|---|---|---|---|---|---|---|
| G0256 | Operationally inspect fuel pumps | 6.15 | 68 | 78 | 80 | 4.89 | 18 |
| J0372 | Overhaul single-point nozzles | 6.23 | 60 | 72 | 68 | 5.72 | 18 |
| D0160 | Inspect tank vents | 3.38 | 28 | 54 | 55 | 4.31 | 17 |
| J0375 | Repair quick disconnect couplings, such as kam-lock or drybreak | 4.62 | 52 | 70 | 66 | 4.90 | 17 |
| P0635 | Attend Prime Base Engineering Emergency Force (BEEF) training | 3.23 | 56 | 57 | 59 | 4.33 | 17 |
| N0548 | Tear down, inspect, clean, and reassemble weapons, such as M-16 rifles | 2.69 | 52 | 75 | 68 | 4.29 | 16 |
| B0074 | Maintain electronic automatic tank gauges (ATGs), such as ITT Barton | 3.69 | 44 | 33 | 38 | 7.17 | 15 |
| H0272 | Flush pipelines | 3.23 | 52 | 46 | 54 | 4.84 | 15 |
| J0371 | Overhaul quick-closing valves | 4.62 | 28 | 37 | 39 | 5.41 | 15 |
| P0636 | Attend skill-level upgrade training | 3.62 | 44 | 48 | 50 | 4.93 | 15 |
| C0117 | Maintain benchstock of spill clean-up materials or equipment | 1.38 | 24 | 39 | 38 | 4.45 | 14 |
| N0529 | Perform explosive ordnance reconnaissance | 1.77 | 28 | 33 | 27 | 4.75 | 14 |
| R0692 | Maintain benchstock parts or equipment levels | 2.08 | 24 | 33 | 30 | 4.66 | 14 |

* Mean TE Rating = 2.75 Standard Deviation = 2.37 High TE = 5.12
** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD = 6.00

# TABLE 35

## EXAMPLES OF TASKS NOT REFERENCED TO POI ELEMENTS WITH 30 PERCENT OR MORE MEMBERS PERFORMING

| TASKS | | TNG EMP | PERCENT MEMBERS PERFORMING 1ST JOB (N=25) | 1ST ENL (N=67) | TASK DIFF | ATI |
|---|---|---|---|---|---|---|
| G0256 | Operationally inspect fuel pumps | 6.15 | 68 | 78 | 4.89 | 18 |
| J0372 | Overhaul single-point nozzles | 6.23 | 60 | 72 | 5.72 | 18 |
| G0249 | Adjust mechanical seals | 6.54 | 60 | 66 | 6.64 | 18 |
| K0379 | Blind flange open pipelines | 4.69 | 84 | 87 | 4.05 | 17 |
| K0387 | Drain pipelines | 4.31 | 88 | 85 | 4.15 | 17 |
| N0535 | Perform self-aid and buddy-care activities | 3.31 | 68 | 79 | 4.77 | 17 |
| K0386 | Drain fuel storage tanks | 3.85 | 76 | 72 | 4.24 | 17 |
| J0375 | Repair quick disconnect couplings, such as kam-lock or drybreak | 4.62 | 52 | 70 | 4.90 | 17 |
| B0081 | Perform tank cleaning worker activities | 4.62 | 48 | 58 | 4.74 | 17 |
| K0380 | Cap off adjoining piping from storage tanks | 3.85 | 48 | 57 | 4.25 | 17 |
| B0068 | Inspect underground storage tank low-level or high-level floats | 4.15 | 52 | 55 | 4.80 | 17 |
| D0160 | Inspect tank vents | 3.38 | 28 | 54 | 4.31 | 17 |
| K0391 | Isolate electrical power from systems | 3.69 | 56 | 54 | 5.37 | 17 |
| B0065 | Inspect tank interiors for corrosion, holes, or pits | 3.77 | 40 | 51 | 5.02 | 17 |
| N0548 | Tear down, inspect, clean, and reassemble weapons, such as M-16 rifles | 2.69 | 52 | 75 | 4.29 | 16 |
| N0505 | Inspect chemical warfare personal protective clothing | 2.54 | 52 | 64 | 4.23 | 16 |
| N0525 | Perform camp security | 2.08 | 60 | 58 | 4.02 | 16 |
| M0437 | Construct field utility systems | 2.31 | 48 | 57 | 5.09 | 16 |
| M0445 | Identify and report suspected unexploded ordnance (UXO) | 2.46 | 48 | 57 | 4.57 | 16 |
| K0381 | Clean deactivated pumps, filter separators, meters, or storage tanks for product recovery systems | 2.00 | 44 | 55 | 4.59 | 16 |
| K0383 | Deactivate electrical power from systems | 2.23 | 60 | 54 | 5.12 | 16 |

* Mean TE Rating = 2.75 Standard Deviation = 2.37 High TE = 5.12

** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD = 6.00

## JOB SATISFACTION ANALYSIS

An examination of the job satisfaction indicators of various groups can give career ladder managers a better understanding of some of the factors which may affect the job performance of airmen in the career ladder. Attitude questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions were included in the survey to provide indications of job satisfaction.

Table 36 presents job satisfaction data for AFSC 3E4X2 TAFMS groups, together with TAFMS data for a comparative sample of Support career ladders surveyed in 1998. Second-enlistment personnel and career airmen rated utilization of talents, utilization of training, and sense of accomplishment higher than the comparative sample. First-enlistment personnel indicated lower job interest, utilization of talents, utilization of training, and sense of accomplishment than the 1998 comparative sample, but they rated their intentions to reenlist higher than the comparative sample. Second-enlistment personnel also indicated that their reenlistment intentions are higher than the comparative sample.

An indication of how job satisfaction perceptions have changed over time is provided in Table 37, where TAFMS data for the current survey respondents are compared to the 1997 survey respondents' perceptions. Job interest, utilization of talents, and utilization of training, and sense of accomplishment have decreased for the 1-48 months' TAFMS groups over the past 2 years while the same factors have increased for the second-enlistment and career airmen over the past 2 years. Reenlistment intentions are slightly lower for all TAFMS groups compared to the 1997 survey.

In Table 38, a review of the job satisfaction ratings for the specialty clusters and jobs identified in this survey reveals high satisfaction ratings for all areas among the Liquid Fuel Systems Maintenance members. The members of the Management Job provided the lowest ratings for job interest, and the members of the Reserve Forces Readiness Job perceive their utilization of talents and training to be low compared to the members of the Liquid Fuel Systems Maintenance Cluster, the General Maintenance Cluster, and Management Job. The 10 members of the Reserve Forces Readiness Job also rated their sense of accomplishment as the lowest among the other job and clusters in the study. The core of the career ladder, however, provided high ratings for the four job satisfaction indicators.

TABLE 36

COMPARISON OF JOB SATISFACTION INDICATORS BY TAFMS GROUPS
(PERCENT MEMBERS RESPONDING)

| | 1–48 MOS TAFMS | | 49–96 MOS TAFMS | | 97+ MOS TAFMS | |
|---|---|---|---|---|---|---|
| | 1999 3E4X2 (N=67) | COMP SAMPLE* (N=249) | 1999 3E4X2 (N=27) | COMP SAMPLE* (N=190) | 1999 3E4X2 (N=71) | COMP SAMPLE* (N=383) |
| EXPRESSED JOB INTEREST: | | | | | | |
| INTERESTING | 57 | 77 | 78 | 80 | 86 | 81 |
| SO-SO | 24 | 13 | 11 | 10 | 6 | 12 |
| DULL | 19 | 10 | 11 | 10 | 8 | 7 |
| PERCEIVED UTILIZATION OF TALENTS: | | | | | | |
| FAIRLY WELL TO PERFECTLY | 72 | 85 | 89 | 83 | 88 | 83 |
| LITTLE OR NOT AT ALL | 28 | 15 | 11 | 17 | 12 | 17 |
| PERCEIVED UTILIZATION OF TRAINING: | | | | | | |
| FAIRLY WELL TO PERFECTLY | 84 | 87 | 89 | 85 | 93 | 81 |
| LITTLE OR NOT AT ALL | 16 | 13 | 11 | 15 | 7 | 19 |
| SENSE OF ACCOMPLISHMENT GAINED FROM WORK: | | | | | | |
| SATISFIED | 65 | 74 | 78 | 72 | 80 | 73 |
| NEUTRAL | 13 | 10 | 15 | 12 | 6 | 9 |
| DISSATISFIED | 22 | 16 | 7 | 16 | 14 | 18 |
| REENLISTMENT INTENTIONS: | | | | | | |
| YES OR PROBABLY YES | 51 | 47 | 63 | 56 | 69 | 72 |
| NO OR PROBABLY NO | 49 | 53 | 37 | 44 | 7 | 11 |
| PLAN TO RETIRE | 0 | 0 | 0 | 0 | 24 | 17 |

* Comparative sample of Support career ladders surveyed in 1998, including AFSCs 3N0X1, 3N0X2, and 3V0X2.

TABLE 37

COMPARISON OF CURRENT SURVEY AND 1997 TAFMS GROUPS
(PERCENT MEMBERS RESPONDING)

| | 1–48 MOS TAFMS | | 49–96 MOS TAFMS | | 97+ MOS TAFMS | |
|---|---|---|---|---|---|---|
| | 1999 3E4X2 (N=67) | 1997 3E4X2 (N=72) | 1999 3E4X2 (N=27) | 1997 3E4X2 (N=48) | 1999 3E4X2 (N=71) | 1997 3E4X2 (N=68) |
| EXPRESSED JOB INTEREST: | | | | | | |
| INTERESTING | 57 | 71 | 78 | 73 | 86 | 85 |
| SO-SO | 24 | 21 | 11 | 15 | 6 | 10 |
| DULL | 19 | 8 | 11 | 12 | 8 | 5 |
| PERCEIVED UTILIZATION OF TALENTS: | | | | | | |
| FAIRLY WELL TO PERFECTLY | 72 | 78 | 89 | 84 | 88 | 81 |
| LITTLE OR NOT AT ALL | 28 | 22 | 11 | 16 | 12 | 19 |
| PERCEIVED UTILIZATION OF TRAINING: | | | | | | |
| FAIRLY WELL TO PERFECTLY | 84 | 91 | 89 | 75 | 93 | 88 |
| LITTLE OR NOT AT ALL | 16 | 9 | 11 | 25 | 7 | 12 |
| SENSE OF ACCOMPLISHMENT GAINED FROM WORK: | | | | | | |
| SATISFIED | 65 | 67 | 78 | 69 | 80 | 86 |
| NEUTRAL | 13 | 25 | 15 | 13 | 6 | 7 |
| DISSATISFIED | 22 | 8 | 7 | 18 | 14 | 7 |
| REENLISTMENT INTENTIONS: | | | | | | |
| YES OR PROBABLY YES | 51 | 53 | 63 | 67 | 69 | 74 |
| NO OR PROBABLY NO | 49 | 47 | 37 | 31 | 7 | 2 |
| PLAN TO RETIRE | 0 | 0 | 0 | 2 | 24 | 24 |

TABLE 38

COMPARISON OF JOB SATISFACTION INDICATORS BY SPECIALTY JOBS
(PERCENT MEMBERS RESPONDING)

| | Liquid Fuel Systems Maintenance Cluster (STG028) (N=156) | General Maintenance Cluster (STG014) (N=20) | Reserve Forces Readiness Job (STG040) (N=10) | Management Job (STG027) (N=16) |
|---|---|---|---|---|
| EXPRESSED JOB INTEREST: | | | | |
| INTERESTING | 74 | 75 | 70 | 63 |
| SO-SO | 14 | 15 | 10 | 25 |
| DULL | 12 | 10 | 20 | 12 |
| PERCEIVED UTILIZATION OF TALENTS: | | | | |
| FAIRLY WELL TO PERFECTLY | 82 | 80 | 60 | 69 |
| LITTLE OR NOT AT ALL | 18 | 20 | 40 | 31 |
| PERCEIVED UTILIZATION OF TRAINING: | | | | |
| FAIRLY WELL TO PERFECTLY | 90 | 65 | 40 | 63 |
| LITTLE OR NOT AT ALL | 10 | 35 | 60 | 37 |
| SENSE OF ACCOMPLISHMENT GAINED FROM WORK: | | | | |
| SATISFIED | 74 | 65 | 30 | 63 |
| NEUTRAL | 13 | 15 | 30 | 6 |
| DISSATISFIED | 13 | 20 | 40 | 31 |

## IMPLICATIONS

This survey was initiated to provide current job and task data for use in evaluating the AFMAN 36-2108 *Specialty Description* and appropriate training documents. Survey results clearly indicate that the present classification structure, as described in the latest specialty description, accurately portrays the jobs performed in this career ladder.

Entry-level training programs for AFSC 3E4X2 personnel appear to be working well as indicated by the high ratings by all TAFMS groups to the question pertaining to training utilization. The survey data indicate that the career ladder training documents are well supported. Some adjustments may be warranted as discussed in the STS and POI analysis sections of this report.

The career ladder progression for the total sample is typical with the move from technical work at the 3- and 5-skill levels to supervisory and management tasks at the 7- skill level. The 7-skill level members are still spending the majority of their time performing tasks that are technical in nature, but they are also spending 25 percent of their time performing management and supervisory activities. The ANG and AFRC members are performing more technical tasks as they progress from one skill level to the next although the career ladder progression for these members is still typical. Much more time is also being spent on mobility, contingency, and Prime BEEF activities by the ANG and AFRC members.

Overall, job satisfaction is higher for second-enlistment personnel and career airmen and reenlistment intentions are higher for first-enlistment and second-enlistment members compared to the sample of like Support AFSCs surveyed in 1998. The 1-48 months' TAFMS group members in this sample are also less satisfied compared to the same TAFMS group in the 1997 study. The career airmen indicated that they are the most satisfied in expressed job interest, their perception of training utilization, and the sense of accomplishment gained from their work.

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# APPENDIX A

## SELECTED REPRESENTATIVE TASKS PERFORMED BY SPECIALTY JOB GROUPS

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TABLE A1

LIQUID FUEL SYSTEMS MAINTENANCE CLUSTER (STG028)

| REPRESENTATIVE TASKS | | PERCENT MEMBERS PERFORMING (N=156) |
|---|---|---|
| A0024 | Install or remove filter-separator elements | 97 |
| A0008 | Cut gasket materials | 97 |
| A0005 | Clean work areas | 96 |
| A0037 | Replace nozzles | 96 |
| C0097 | Clean up fuel spills with absorbent materials | 96 |
| A0003 | Clean hand tools | 96 |
| A0041 | Thread pipes | 94 |
| E0228 | Troubleshoot automatic valves | 93 |
| A0039 | Replace service station fuel hoses | 92 |
| K0385 | Drain filter separators | 92 |
| E0207 | Operationally inspect automatic control valves or components | 92 |
| E0203 | Inspect valve position indicators (VPIs) | 92 |
| E0227 | Replace diaphragms | 91 |
| A0028 | Operationally inspect filter separators | 90 |
| L0411 | Perform tag-out or lock-out procedures | 90 |
| D0173 | Join pipes with bolted flanges | 90 |
| D0174 | Join pipes with threaded fittings | 90 |
| F0229 | Adjust packing glands on manual valves | 90 |
| E0198 | Adjust pressure-relief controls | 90 |
| J0357 | Inspect hose connections | 89 |
| D0168 | Install or remove pressure gauges | 89 |
| E0199 | Adjust rate-of-flow controls | 89 |
| A0026 | Manually bleed air off fuel systems | 89 |
| A0015 | Ground portable equipment | 88 |
| G0256 | Operationally inspect fuel pumps | 88 |
| E0200 | Inspect automatic valve main valve bodies | 88 |
| F0243 | Repair or replace manual valves, other than check valves | 88 |
| E0220 | Repair or replace pressure-relief controls | 88 |
| I0345 | Replace service station pump hoses | 87 |
| I0319 | Operationally inspect service station pumps | 87 |
| B0054 | Inspect air compressors or hoses | 87 |
| F0235 | Operationally inspect manual valves, other than check valves | 87 |
| H0305 | Replace flange gaskets | 87 |
| F0230 | Inspect check valves | 87 |
| A0021 | Inspect product recovery systems | 87 |
| E0197 | Adjust pressure-reducing controls | 87 |
| E0219 | Repair or replace pressure-reducing controls | 87 |
| I0316 | Operationally inspect service station dispensers | 86 |
| A0040 | Test vapor levels in enclosed areas | 86 |
| E0196 | Adjust opening or closing speed controls | 86 |
| E0221 | Repair or replace rate-of-flow controls | 86 |
| I0341 | Replace service station nozzles | 85 |
| I0313 | Inspect service station fuel hoses | 85 |
| I0311 | Calibrate service station pump dispensing unit meters | 85 |

TABLE A2

GENERAL MAINTENANCE CLUSTER (STG014)

| REPRESENTATIVE TASKS | | PERCENT MEMBERS PERFORMING (N=20) |
|---|---|---|
| A0005 | Clean work areas | 95 |
| A0003 | Clean hand tools | 95 |
| A0008 | Cut gasket materials | 95 |
| A0024 | Install or remove filter-separator elements | 90 |
| C0097 | Clean up fuel spills with absorbent materials | 80 |
| A0015 | Ground portable equipment | 80 |
| A0041 | Thread pipes | 75 |
| A0039 | Replace service station fuel hoses | 75 |
| A0028 | Operationally inspect filter separators | 70 |
| A0037 | Replace nozzles | 70 |
| A0026 | Manually bleed air off fuel systems | 65 |
| A0018 | Inspect grounding cables, rods, or bonding devices | 60 |
| A0025 | Install or remove strainer screens | 60 |
| A0016 | Ground tank cars, trucks, or other vehicles | 60 |
| A0007 | Cut copper tubing | 60 |
| K0385 | Drain filter separators | 55 |
| A0004 | Clean strainer screens | 55 |
| A0017 | Inspect dikes or dike basins | 55 |
| A0009 | Cut pipes with hand tools | 55 |
| A0014 | Flare copper tubing | 55 |
| N0548 | Tear down, inspect, clean, and reassemble weapons, such as M-16 rifles | 55 |
| A0001 | Bend copper tubing | 55 |
| D0174 | Join pipes with threaded fittings | 50 |
| A0040 | Test vapor levels in enclosed areas | 50 |
| A0019 | Inspect loading fuel hoses | 45 |
| H0305 | Replace flange gaskets | 45 |
| G0255 | Lubricate pump motors | 45 |
| B0060 | Inspect manhole covers for leaks | 45 |
| N0501 | Don or doff chemical warfare personal protective clothing | 45 |
| D0173 | Join pipes with bolted flanges | 45 |
| B0043 | Clean protective clothing or equipment, other than chemical warfare | 45 |
| N0535 | Perform self-aid and buddy-care activities | 45 |
| A0012 | Cut stencils | 45 |
| A0010 | Cut pipes with power cutters | 45 |
| G0256 | Operationally inspect fuel pumps | 40 |
| D0154 | Inspect aboveground tanks | 40 |
| E0228 | Troubleshoot automatic valves | 40 |
| A0023 | Install or remove compression fittings, such as ferrules | 40 |
| C0112 | Inspect fire extinguishers | 35 |
| A0032 | Perform corrosion control on exterior metal surfaces | 35 |
| A0020 | Inspect off-loading fuel hoses | 35 |
| L0411 | Perform tag-out or lock-out procedures | 35 |
| K0387 | Drain pipelines | 35 |
| H0273 | Hydrostatically pressure-test pipeline systems | 35 |

TABLE A3

RESERVE FORCES READINESS JOB (STG040)

| REPRESENTATIVE TASKS | | PERCENT MEMBERS PERFORMING (N=10) |
|---|---|---|
| N0548 | Tear down, inspect, clean, and reassemble weapons, such as M-16 rifles | 100 |
| N0535 | Perform self-aid and buddy-care activities | 100 |
| N0526 | Perform chemical warfare agent decontamination procedures | 100 |
| N0525 | Perform camp security | 100 |
| N0523 | Participate in convoy exercises | 100 |
| N0527 | Perform cover and concealment techniques for work party security | 100 |
| N0524 | Perform camouflage procedures | 100 |
| N0501 | Don or doff chemical warfare personal protective clothing | 90 |
| N0506 | Inspect mobility bags or kits | 90 |
| N0504 | Identify chemical warfare agents | 90 |
| N0529 | Perform explosive ordnance reconnaissance | 90 |
| N0531 | Perform or set up site security | 90 |
| N0530 | Perform hardened facility activities | 90 |
| M0454 | Lay AM-2 matting | 90 |
| N0505 | Inspect chemical warfare personal protective clothing | 80 |
| N0549 | Transport mobility or contingency equipment to or from deployed locations | 80 |
| N0536 | Prepare equipment for deployments | 80 |
| N0503 | Fill sandbags | 80 |
| M0445 | Identify and report suspected unexploded ordnance (UXO) | 80 |
| N0507 | Inspect packed or palletized mobility or contingency equipment prior to transport | 80 |
| N0534 | Perform RRRs | 80 |
| N0528 | Perform disease or pestilence countermeasures | 80 |
| M0466 | Operate and maintain shower/shave units | 80 |
| A0005 | Clean work areas | 80 |
| M0467 | Perform bomb damage repairs, other than crater repairs | 80 |
| N0484 | Assemble rapid utility repair kits, such as RURK Is or RURK IIs | 80 |
| P0635 | Attend Prime Base Engineering Emergency Force (BEEF) training | 70 |
| M0480 | Set up or tear down bare base structures | 70 |
| N0487 | Clean chemical warfare personal protective clothing | 70 |
| P0659 | Maintain training records or files | 70 |
| M0465 | Operate and maintain field utility systems | 70 |
| M0479 | Repair bomb craters | 70 |
| M0436 | Construct field latrines | 70 |
| N0500 | Dig trenches | 70 |
| M0437 | Construct field utility systems | 70 |
| M0427 | Assemble AM-2 matting | 70 |
| N0547 | Set up and operate reverse osmosis water purification units (ROWPUs) | 60 |
| M0471 | Perform damage assessments | 60 |
| N0537 | Prepare sites at deployed locations, such as cutting grass or removing snow | 60 |
| O0556 | Conduct self-inspections or self-assessments | 60 |
| N0540 | Refuel tent heaters | 60 |
| R0690 | Inventory equipment, tools, parts, or supplies | 50 |
| M0473 | Perform damage control activities, other than command and control activities | 40 |

TABLE A4

MANAGEMENT JOB (STG027)

| | REPRESENTATIVE TASKS | PERCENT MEMBERS PERFORMING (N=16) |
|---|---|---|
| O0625 | Schedule work assignments or priorities | 100 |
| O0562 | Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace | 100 |
| O0564 | Determine or establish work assignments or priorities | 94 |
| O0572 | Direct training activities | 94 |
| P0661 | Plan or schedule training | 94 |
| O0586 | Evaluate job or position descriptions | 94 |
| O0606 | Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting | 88 |
| O0593 | Evaluate personnel for promotion, demotion, reclassification, or special awards | 88 |
| O0603 | Inspect personnel for compliance with military standards | 88 |
| P0645 | Determine training requirements | 88 |
| P0664 | Schedule personnel for training | 88 |
| P0659 | Maintain training records or files | 88 |
| O0596 | Evaluate work schedules | 88 |
| O0561 | Counsel subordinates concerning personal matters | 88 |
| O0556 | Conduct self-inspections or self-assessments | 88 |
| O0559 | Conduct supervisory performance feedback sessions | 81 |
| O0630 | Write recommendations for awards or decorations | 81 |
| O0570 | Develop or establish work schedules | 81 |
| O0629 | Write performance reports or supervisory appraisals | 81 |
| O0560 | Coordinate maintenance of liquid fuel systems, other than tank cleaning, with appropriate agencies | 81 |
| P0643 | Conduct on-the-job training (OJT) | 81 |
| R0690 | Inventory equipment, tools, parts, or supplies | 81 |
| O0601 | Initiate actions required due to substandard performance of personnel | 81 |
| O0604 | Interpret policies, directives, or procedures for subordinates | 81 |
| O0571 | Direct administrative activities | 75 |
| O0592 | Evaluate personnel for compliance with performance standards | 75 |
| O0551 | Assign personnel to work areas or duty positions | 75 |
| P0655 | Evaluate progress of trainees | 75 |
| O0558 | Conduct supervisory orientations for newly assigned personnel | 75 |
| P0644 | Counsel trainees on training progress | 75 |
| O0580 | Establish performance standards for subordinates | 75 |
| R0689 | Initiate requisitions for equipment, tools, parts, or supplies | 75 |
| O0569 | Develop or establish work methods or procedures | 75 |
| O0623 | Schedule personnel for temporary duty (TDY) assignments, leaves, or passes | 75 |
| O0611 | Plan equipment or facility maintenance requirements | 75 |
| O0595 | Evaluate safety or security programs | 75 |
| O0600 | Indorse performance reports or supervisory appraisals | 69 |
| P0635 | Attend Prime Base Engineering Emergency Force (BEEF) training | 69 |
| P0654 | Evaluate personnel to determine training needs | 69 |
| O0589 | Evaluate logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace | 69 |