

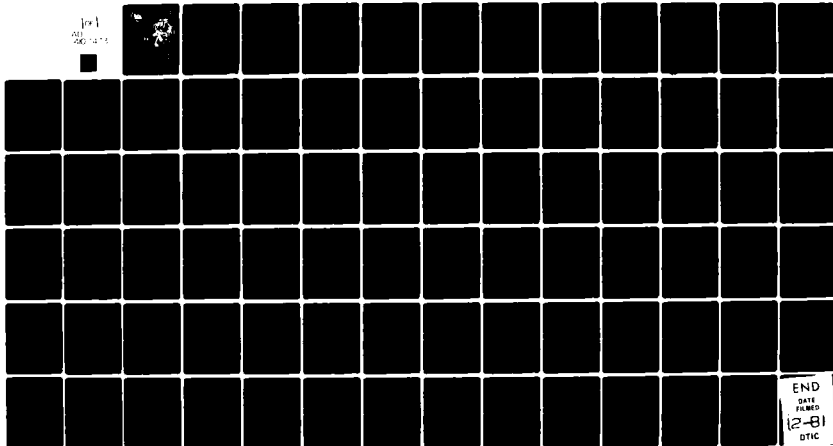
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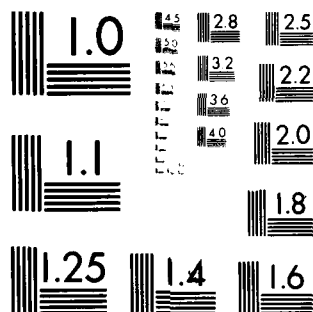
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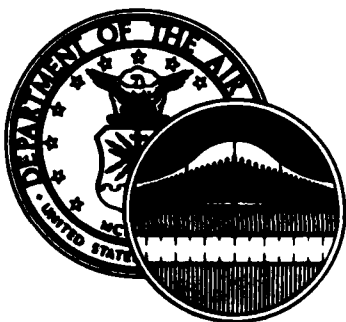
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**OCCUPATIONAL
SURVEY
REPORT**



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FUELS CAREER LADDER

AFSC 631X0

AFPT 90-631-430

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**OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
AIR TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150**

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PREFACE

This report presents the results of a detailed Air Force occupational survey of the Fuels specialty (AFS 631X0). The project was undertaken at the request of HQ ATC/TTQ and was directed by USAF Program Technical Training Volume II, dated June 1980. Authority for conducting occupational surveys is contained in AFR 35-2. Computer outputs from which this report was produced are available for use by operating and training officials.

The United States Air Force occupational analysis program originated in 1956 when initial research was undertaken by the Air Force Human Resources Laboratory to develop the methodology for conducting occupational surveys. In 1967, Air Training Command (ATC) established an operational analysis program which initially produced 12 enlisted career ladder surveys annually. The program was expanded in 1972 to produce surveys of 51 career ladders each year and again in 1976 to include the survey of officer utilization fields, to permit special applications projects, and to support interservice or joint service occupational analyses.

The survey instrument used in the present project was developed by Second Lieutenant Kevin F. Morefield, Inventory Development Specialist. Mr. Guy B. Cole analyzed the data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief, Airman Career Ladders Analysis Section, Occupational Analysis Branch, USAF Occupational Measurement Center, Randolph AFB, Texas 78150.

Copies of this report are available to air staff sections, major commands, and other interested training and management personnel upon request to the USAF Occupational Measurement Center, attention of the Chief, Occupational Analysis Branch (OMY), Randolph AFB, Texas 78150.

This report has been reviewed and is approved.

PAUL T. RINGENBACH, Col, USAF
Commander
USAF Occupational Measurement
Center

WALTER E. DRISKILL, Ph.D.
Chief, Occupational Analysis Branch
USAF Occupational Measurement
Center

SUMMARY OF RESULTS

1. Survey Objectives: This survey was requested by HQ ATC/TTQ to provide current task and background data for the review and update of the Specialty Training Standard (STS). Additionally the data have been analyzed to provide the job structure of the career field, levels of job satisfaction, and other pertinent information concerning the utilization of personnel in this specialty.
2. Survey Coverage: Inventory booklets were administered worldwide to a stratified random sample of fuels personnel during the period September 1980 through March 1981. The 2,208 survey respondents represent 35 percent of the 631X0 personnel assigned. All commands, skill levels, and CONUS/overseas groups were adequately represented in this sample.
3. Job Structure: The career ladder structure analysis identified 15 different job types performed by Fuels personnel. Basically these jobs can be categorized as Fuels Distribution, Storage, Supervision and Control, Training, Accounting, and Quality Assurance.
4. AFR 39-1 Specialty Description Review: Comparison of tasks performed to Specialty Descriptions dated 30 April 1981 indicates that these descriptions present a clear and concise overview of the career ladder functions.
5. STS Review: Comparison of the task data to STS items indicates that the major functions of the career ladder are covered. Areas that may warrant additions to the STS include the various refueling procedures or techniques, such as combat turnaround and multiple aircraft refueling. A utilization and training workshop review of this document appears to be warranted.
6. Training Analysis: Most of the objectives in the POI are substantiated by the tasks performed by first enlistment airmen. One exception was the training related to Air Transportable Hydrant Systems in Block II. In addition, in view of the number of personnel involved in special refueling techniques (e.g., combat refueling), instruction on these may be warranted. Again, this should be a subject of discussion at the utilization and training workshop.
7. Analysis of Write-Ins: As usual, the write-in section served primarily as an aid in the analysis of the data by suggesting reasons for some of the results and pointing out some unique work situations or specialized jobs. The primary emphasis of the write-ins received were with regard to dissatisfaction with their job because of the time spent on painting, odd jobs, and landscaping.
8. Analysis of Job Satisfaction: Fifty-eight percent of the first-term airmen indicated that their jobs were dull or so-so. Although somewhat lower than the comparative data for personnel in similar career ladders surveyed in 1980, it was 10 percent higher than in the 1976 survey of this career field. Reenlistment intentions of first-term personnel were about equal for this ladder and the comparative groups. Reenlistment intentions for second enlistment and career personnel, however, were considerably higher for fuels personnel than for members of the comparative sample.

9. Implications: No critical problem areas were identified in this specialty. Data indicated, however, that some adjustments in the STS and possibly minor changes in the basic course may be warranted. These changes should be considered during a training and utilization workshop to provide opportunities for inputs from each major command. Other topics which should be discussed during this workshop are:

1. Job enhancement for first-term Fuels personnel assigned to distribution and storage functions.
2. Utilization and training of Accounting and Fuels Laboratory personnel.

These two areas appear to be the two major management concerns in the utilization of Fuels personnel.

OCCUPATIONAL SURVEY REPORT
FUELS CAREER LADDER
(AFSC 631X0)

INTRODUCTION

This is a report of an occupational survey of the Fuels specialty (AFSC 631X0) completed by the Occupational Analysis Branch, USAF Occupational Measurement Center, in August 1981. The survey was initiated at the request of HQ ATC/TTQ to provide current task and background data for use in the review and update of the Specialty Training Standard (STS) and to evaluate the current training provided for personnel in this ladder. In addition, it was felt by many individuals that there is sufficient specialization in the fuel accounting and quality control functions to warrant shreds at the 3- and 5-skill levels for these functions. Consequently, these issues have been addressed in the analysis of the data.

Background

When this career ladder was initially established as an Air Force Specialty in 1954, it was part of the Supply career field as the Petroleum Supply career ladder (AFS 643X0). In 1959, an A-shred for conventional fuels and a B-shred for non-conventional fuels were established to differentiate jobs involving handling of the conventional petroleum fuels from those involving the exotic fuels for missiles. In September 1964, the Fuels career field, 63XXX, was created and the Petroleum Supply ladder was moved to this new career field and retitled Fuel Specialist, AFS 631X0. The shreds were also retitled as A, Petroleum Fuels, and B, Missile Liquid Fuels. Primary functions were essentially the same as before. In March 1970, the shreds were deleted; however, responsibility for both petroleum and missile fuels was retained until early in 1977. At that time, the responsibility for receipt, storage, and issue of missile fuels was transferred to the Liquid Fuels System Maintenance career ladder (AFSC 546X0F) in the Missile career field.

A previous occupational survey of the Fuels career ladder was published in May 1976. Comparisons of the results of this survey and those of the 1976 survey are included in this report.

Formal training for personnel entering the Fuels specialty is conducted at Chanute AFB, Illinois. This is a 26-day course which includes instruction in fundamentals and mechanical fuel systems, permanently installed hydrants air transportable systems, and fuel servicing vehicles. Most individuals entering the Fuels career ladder attend this course prior to being assigned to an operating unit, although a few individuals are assigned to operating units without attending the basic course.

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Objectives

This report examines the Fuels career ladder (AFSC 631X0) primarily on the basis of the tasks performed by survey respondents. Topics discussed in the report include: (1) the development and administration of the survey instrument; (2) the kinds of jobs performed by Fuels personnel; (3) CONUS versus Overseas differences; (4) comparisons of task data to current AFR 39-1 Specialty Descriptions, the Specialty Training Standard (STS), and Plan of Instruction (POI); (5) job satisfaction and other related background data; and (6) comparison of the final results to previous occupational surveys.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-631-430. The survey instrument from the 1976 survey served as a starting point for development of the new inventory. The previous task list was carefully reviewed to determine the appropriateness of each task. The remaining tasks were updated and refined after thorough research of career ladder publications and directives, and after personal interviews with 12 individuals assigned to various operational facilities. These facilities included Randolph AFB TX (ATC), McConnell AFB KS (SAC), Vandenberg AFB CA (SAC), and Bergstrom AFB TX (TAC). In addition, 11 staff personnel directly associated with the management or training of personnel in this career ladder were contacted for information concerning problem areas or questions that might be addressed in the Occupational Survey Report. Their inputs were carefully considered in the design and development of the survey instrument to obtain data that would be useful in career field management.

Survey Administration

During the period September through December 1980, Consolidated Base Personnel Offices in operational units worldwide administered the survey to personnel holding the Fuels (631X0) DAFSC. Personnel were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL). During the time that the inventory was in the field, a request was received for additional information which was not included in the original inventory. Since this information was important to the overall results of the survey, a supplement was prepared and mailed to each respondent who returned the original inventory. The supplement was in the field from 19 December 1980 to 17 March 1981. The supplementary information received was integrated with each individual's responses to the original inventory to form one complete record. Individuals who did not complete the supplementary items were not included in the final survey sample.

Each individual who filled out an inventory first completed an identification and biographical information section and then checked each task performed in their current job. After checking all tasks performed, each

member then rated each of these tasks on a nine-point scale showing relative time spent on the task as compared to all other tasks checked. The ratings ranged from one (very small amount of time spent) through five (about average time spent) to nine (very large amount time spent).

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

Task Factor Administration

In addition to completing a job inventory, selected senior 631X0 personnel were also asked to complete a second booklet for task difficulty. The task difficulty booklets are processed separately from the job inventories. This information is used in a number of different analyses discussed in more detail within the report.

Task Difficulty. Task difficulty data were independently solicited from experienced 7- or 9-skill level Fuels personnel stationed worldwide. Each senior NCO completing a task difficulty booklet was asked to rate all of the tasks on a nine-point scale from extremely low to extremely high as to the relative difficulty of that task. Difficulty is defined as the length of time required for an average member to learn to do that task. The interrater reliability (as assessed through components of variance of standard group means) for the 52 raters who returned booklets was .96, which suggests very high agreement. Ratings were then adjusted so that tasks of average difficulty have ratings of 5.0. The resulting data is a rank ordering of tasks indicating a degree of difficulty for each task in the inventory.

When used in conjunction with other factors, such as percent members performing, the task difficulty ratings can provide insight into the training requirements of a specialty. This may help validate the lengthening or shortening of specific units of instruction when refining various training programs.

Training Emphasis. In addition to collecting information on tasks performed and the relative difficulty of each task, an additional group of senior NCOs were also selected to provide data relative to which tasks should be emphasized in training first-term airmen. In collecting these data, selected senior NCOs were tasked to rate each task in the inventory on a ten-point scale, based on the amount of training emphasis the task should receive. This scale ranged from zero for those tasks requiring no training to nine for tasks requiring extremely high training emphasis. These relative ratings can then be used, along with other data, such as percent members performing and task difficulty, to determine which tasks should or should not be emphasized in any type of structured training for first-term airmen.

Training emphasis data were received from 57 senior NCOs in this career ladder. The interrater reliability (as assessed through components of variance of standard group means) for these raters was .97, which indicated

that there was a high degree of agreement among raters as to which tasks required some form of structured training and which did not. Tasks which were highest in training emphasis had ratings of 4.8 and above, while the average rating was 2.9. Those tasks with a training emphasis rating of 1.0 and below could be considered to require very little emphasis in training.

Survey Sample

Personnel were selected to participate in this survey so as to insure an accurate representation across all MAJCOM and paygrade groups. Due to the large number of assigned personnel (6,291), booklets were only sent to approximately 55 percent (3,485) of the personnel in the career ladder. A total of 2,208 surveys were completed where the job inventory could be matched with supplementary data collected later. Thus, the final sample represents a return rate of 63 percent, or 35 percent of all career field personnel. Although this final sample is less than the expected 50 percent of the career field, the loss of some cases was due to the problems of field administrative of supplementary tasks and matching the new data with job inventories, rather than any lack of response from the field. Table 1 reflects the major command distribution of personnel assigned to the 631X0 career ladder as compared to the percentage of survey booklets received. Table 2 reflects the percentage distributions by paygrade. Table 3 shows the distribution of personnel sampled by months Total Active Federal Military Service.

Overall, the returns appear to accurately represent the career ladder as a whole.

TABLE 1

COMMAND REPRESENTATION OF SURVEY SAMPLE

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
SAC	26	28
TAC	20	22
USAFE	17	14
MAC	14	15
PACAF	8	7
ATC	6	7
AAC	3	3
AFSC	2	3
AFLC	1	1
OTHER	3	**
TOTAL	100	100

* AS OF JANUARY 1981

** LESS THAN .5 PERCENT

TOTAL ASSIGNED - 6,291

TOTAL BOOKLETS MAILED - 3,485 (55 PERCENT STRATIFIED RANDOM SAMPLE)

TOTAL BOOKLETS RETURNED - 2,208

RETURN RATE - 63%

TABLE 2
PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
AIRMAN (E-2, E-3)	39	38
E-4	28	25
E-5	19	21
E-6	8	9
E-7	4	5
E-8	1	1
E-9	<u>1</u>	<u>1</u>
TOTAL	100	100

TABLE 3
TAFMS DISTRIBUTION OF SURVEY SAMPLE

<u>TAFMS (MONTHS)</u>	<u>PERCENT OF SAMPLE</u>
1-48	57
49-96	14
97-144	12
145-192	6
193-240	6
241+	<u>5</u>
TOTAL	100

Data Processing and Analysis

Once job inventories are returned from the field, they are prepared so that task responses and background information can be optically scanned. Other biographical information (such as name, base, AUTOVON extension) is keypunched onto disks and entered directly into the computer. Once both sets of data are in the computer, they are merged to form a complete case record for each respondent. Computer generated programs using Comprehensive Occupational Data Analysis Programs (CODAP) techniques were then applied to the data.

CODAP produces job descriptions for respondents based on their responses to specific inventory tasks. Computer generated job descriptions are available for DAFSC groups, TAFMS groups, and MAJCOM groups. and include such information as percent members performing each task, the average percent time spent performing each task, and the cumulative average percent time spent by all members for each task in the inventory. In addition to these job descriptions, summaries are also produced showing the percentage of each group who responded positively to each background item. This information identifies background characteristics of the group such as DAFSCs represented, time in career field or Total Active Federal Military Service, previous experience in the various functional areas, job title or functional group to which assigned, and fuel equipment operated.

CAREER LADDER STRUCTURE

The first step in the analysis of occupational data is to determine how career ladder incumbents are actually used in the field. In many instances, management has established standardized organizational patterns to be followed in the accomplishment of the career ladder mission. In some instances, these consist of a detailed organizational structure outlining specific job content, supervisory levels, and inspection and evaluation entities. In other ladders, individual missions are so diverse that local management is allowed from considerable to complete latitude in the organizational structure. In these cases, jobs may differ considerably, one from the other, based on such factors as the specific equipment maintained, aircraft worked on, size of organization, etc. Therefore, a career ladder structure analysis is accomplished to identify jobs performed based on similarity of task responses rather than relying on the "official" structure or on what subject matter specialists say exists. In this way, the analyst can determine, based on tasks performed, how career ladder personnel are actually used. Not only does this provide a basis for management to evaluate existing organizational directives, but it also may identify additional kinds of jobs that do not properly fit the various authorized or recognized job structures.

The structure of jobs within the Fuels career ladder was examined on the basis of similarity of tasks performed and the average percent time spent ratings provided by job incumbents, independent of other background factors.

For the purpose of organizing individual jobs into similar units of work, an automated job clustering program is used. This hierarchical grouping program is a basic part of the Comprehensive Occupational Data Analysis Program (CODAP) system for job analysis. Each individual job description in the sample is compared to every other job description in terms of tasks performed and the relative amount of time spent on each task in the job inventory. The automated system is designed to locate the two job descriptions with the most similar tasks and percent time ratings and combine them to form a composite job description. In successive stages, new members are added to initial groups or new groups are formed based on the similarity of tasks and percent of time ratings in each individual job description. This procedure is continued until all individual and groups are combined to form a single composite representing the total sample. The resulting analysis of the variety of groups of jobs serves to identify: (1) the number and characteristics of the different jobs which exist within the career ladder; (2) the tasks which tend to be performed together by the same respondents; and (3) the breadth or narrowness of the jobs which exist within the career ladder.

The basic identifying group used in the hierarchical job structuring process is the Job Type. A job type is a group of individuals who perform many of the same tasks and spend similar amounts of time performing them. When there is a substantial degree of similarity between different job types, they are grouped together and labeled as Clusters. In many career ladders, there are specialized job types that are too dissimilar to be grouped into any cluster. These unique groups are labeled Independent Job Types.

The jobs performed by Fuels career ladder incumbents are illustrated in Figure 1. Based on the similarity of tasks performed and the amount of time spent performing each task, 10 clusters and five independent job types were identified. These clusters and independent job types are listed below:

- I. MOBILE DISTRIBUTION SYSTEMS OPERATORS (GRP177, N=636)
- II. PREVENTIVE MAINTENANCE AND DISTRIBUTION NCOs (GRP172, N=89)
- III. DISTRIBUTION AND STORAGE SYSTEMS OPERATORS (GRP243, N=129)
- IV. TECHNICAL SCHOOL INSTRUCTORS (GRP531, N=10)
- V. FUEL STORAGE OPERATORS (GRP200, N=213)
- VI. FUEL STORAGE SUPERVISORS (GRP112, N=81)
- VII. SERVICE STATION OPERATORS (GRP137, N=19)
- VIII. LIQUID OXYGEN (LOX) STORAGE PERSONNEL (GRP086, N=14)
- IX. FUEL DISTRIBUTION AND FUEL CONTROL UNIT SUPERVISORS (GRP095, N=177)
- X. FUEL OPERATIONS SUPERVISORS (GRP091, N=195)
- XI. QUALITY CONTROL TECHNICIANS-SUPERVISORS (GRP125, N=11)
- XII. FUEL CONTROLLERS (GRP042, N=44)
- XIII. FUEL TRAINING NCOs (GRP033, N=47)
- XIV. QUALITY CONTROL LABORATORY PERSONNEL (GRP062, N=120)
- XV. FUEL ACCOUNTING PERSONNEL (GRP021, N=167)

The respondents forming these clusters and job types account for 88 percent of the survey sample. The remaining 12 percent did not group with any of the above clusters or job types. Many of the individuals whose jobs did not appear in the above groupings performed very specialized jobs. Some of the job titles held by these personnel included: MAJCOM Fuel Manager, Fuel Logistic Planner, Command Energy Conservation Monitor, MAJCOM Fuel Planner, MAJCOM Fuel Accounting Procedures Manager, and NCOIC, Special Projects. These personnel did not group with any cluster or job type because of either the unique job they performed or the manner in which they perceived their job.

Overview

Personnel in the Fuels career ladder perform a number of different kinds of jobs in support of the various functions associated with the receipt, storage, quality control, distribution, and accounting for petroleum fuels. As expected, the largest group of individuals identified in the structure analysis

INDEPENDENT JOB TYPE



were working in some phase of the Mobile Distribution function which involves the delivery of fuel from the storage facility to the aircraft on the flightline or to the ground equipment in the motor pool. The second largest group included personnel who were primarily responsible for the receipt of fuel from suppliers and the storage of that fuel until needed. In addition to these two primary functions are a number of important support jobs, such as Preventive Maintenance personnel, Fuel accountants, Quality assurance personnel, and fuel control personnel, each contributing their specialized skills to the Fuel function. To maintain proficiency in the Fuels career ladder, management has also assigned selected individuals as training NCOs to assist supervisors in the OJT programs for fuels personnel. Also, a few individuals are assigned as instructors at the Technical School.

The following paragraphs contain brief descriptions of the specific job clusters and job types identified by the career field analysis. Tables 4, 5, and 6 show comparisons between the various job clusters and job types based on percent time spent on duties (Table 4), comparisons of background information (Table 5), and job satisfaction data (Table 6).

I. MOBILE DISTRIBUTION SYSTEMS OPERATOR CLUSTER. This large cluster of 636 personnel includes personnel engaged in the mobile distribution of fuel. Typically these personnel perform an average of 32 tasks primarily involving the operation of refueling equipment. Typical tasks performed by 75 percent or more of this group include:

- Operate R-5 and R-9 tank trucks
- Fill mobile refueling units from bulk storage
- Ground refueling equipment
- Bond refueling equipment
- Make entries on Fuels Issue/Defuel Document (DOD) forms (AF Form 1994)
- Check refueling equipment
- Make entries on Filter Separator Pressure Differential Log forms (AFTO Form 422) during issue
- Defuel aircraft
- Perform return to bulk operations

As shown in Table 5, 94 percent of this group are in their first enlistment, and average only 27 months in service. This low experience level is also reflected by the fact that 50 percent of this group are still at the 3-skill level.

As shown in Table 6, over two-thirds of these personnel felt that their job was dull or so-so, quite a large number of the Fuels career ladder, considering that this group accounts for 29 percent of the respondents to the survey. Over one-half felt that their talents were used little or not at all; however, 85 percent felt that they used their training fairly well or better.

This cluster was composed of three job type groups. Primary differences between the three groups pertained primarily to the scope of job performed. The first job type group, containing 192 personnel, performed an average of approximately 42 tasks associated primarily with mobile refueling of aircraft. In addition, however, approximately 20 percent of their work time was devoted to storage tasks, considerably more than that of the other two

job type groups. The second group of 368 incumbents was concerned primarily with fuel distribution, with only a few storage tasks performed. The third group of 26 incumbents was also composed of fuel distribution personnel but contained very low experience personnel performing relatively few tasks, all dealing with the mobile distribution of fuel.

II. PREVENTIVE MAINTENANCE AND DISTRIBUTION NCOs CLUSTER. Most of these individuals are assigned to Mobile Distribution units. Many of the tasks performed by this group are essentially the same as those characteristic of the preceding cluster. In addition, however, this group performs a number of preventive maintenance and supervisory tasks. These include such tasks as:

- Coordinate vehicle maintenance with vehicle maintenance section
- Direct maintenance activities
- Maintain status boards, charts, or graphs
- Determine work priorities
- Inspect reported discrepancies
- Direct utilization of equipment
- Review Operator's Inspection Guide and Trouble Reports (Fuels Servicing) forms (AFTO Form 371)
- Establish priorities for restoring equipment to operational status

Approximately half perform the preventive maintenance functions as a part of their firstline supervision. The remainder serve as preventive maintenance personnel, insuring that equipment is properly maintained.

As shown in Table 5, the increased scope and responsibility of personnel in this cluster is illustrated by the fact that 89 percent of this group are 5- or 7-skill level and their average grade is 4.3, as compared with an average grade of 3.3 for personnel in the Mobile Distribution Systems Operator cluster. Job interest and utilization of talents are slightly better for this group (see Table 6) in that one-half felt that their job was interesting, with two-thirds reporting that their talents were used fairly well or better.

III. DISTRIBUTION AND STORAGE SYSTEMS OPERATOR CLUSTER. The 129 airmen in this group perform an average of 78 tasks involving both the distribution and storage of fuel. This group is made up of several types of individuals, including 32 percent Mobile Distribution Operators, 25 percent Storage Attendants, 18 percent Hydrant Operators, and eight percent Operator of Fuel Dispensing Systems. In addition to fueling and defueling aircraft, personnel in this group issue ground products using mobile refueling units and work in base service stations. Over three-fourths also perform a variety of storage functions including receiving and issuing fuels from bulk storage, gauging tanks for fuel quantity and temperature, completing appropriate forms involving issue and storage of fuel, and draining water from storage tanks. Specific tasks illustrating the scope of work performed by this group include:

- Fill mobile refueling units from bulk storage
- Ground refueling equipment
- Operate R-5 and R-9 tank trucks
- Make entries on Filter Separator Pressure Differential Log forms (AFTO Form 422) during receipt
- Gauge tanks for fuel quantity and temperature
- Defuel aircraft
- Make entries on Fuel System Discrepancy and Inspection Record forms (AFTO Form 39) for storage operations
- Monitor hoses, valves, or pumps during receiving operations

As shown in Table 5, approximately two-thirds of the individuals in this group are 5-skill levels, with most of the remainder at the 3-skill level. On the average, these personnel have considerably more Air Force experience than members of the Mobile Distribution Systems Operator group (I) and the Fuels Storage Operators group (V). Although quite low in comparison to some of the other groups, job satisfaction for this group was somewhat higher than for personnel who worked only in mobile distribution or storage functions (see Table 6).

IV. TECHNICAL SCHOOL INSTRUCTORS CLUSTER. This small group of 10 personnel serve as instructors in the basic course at Chanute. In addition to performing a number of technical tasks in demonstrating or instructing in refueling, storage, accounting and quality control, these personnel perform such tasks as:

- Conduct resident course classroom training
- Administer tests
- Score tests
- Counsel trainees on training progress
- Demonstrate how to locate technical information
- Evaluate progress of resident course students

Job interest for this group was higher than for most other groups, with 80 percent finding their job interesting and 100 percent feeling that their job used their talents and training fairly well or better.

V. FUEL STORAGE OPERATORS CLUSTER. This cluster of 213 personnel includes airmen whose primary job is the storage of fuel. While incumbents in this cluster performed a few tasks from other duties, over 60 percent of their average time spent is on duty F, Performing Storage Functions. Personnel working in these functions perform considerably more tasks than personnel working in the Mobile Distribution cluster (I). In addition, these personnel, on the average, are more senior than the mobile distribution personnel, reflecting the general tendency toward assignment of the newly acquired airmen to mobile distribution rather than to storage. Their primary job includes such tasks as:

- Position and empty drip pans
- Monitor hoses, valves, or pumps during receiving operations
- Make entries on bulk storage summary forms (AF Form 1233)
- Inspect grounding or bonding cables
- Accept and store jet propellant (unspecified) (JPX)
- Inspect issuing or receiving hoses
- Gauge tanks for fuel quantity and temperature
- Make entries on record of receipt forms (AF Form 1231)
- Perform operator maintenance on bulk storage systems
- Issue ground products from base service stations
- Inspect shipments for type fuel, sediment, or water

Although approximately two-thirds of these personnel operate passenger sedans or light pickups, the operation of other mobile equipment is considerably below that of the mobile distribution personnel. Although personnel in this cluster perform jobs that differ considerably from mobile distribution personnel, the two groups are almost equal in their expressed job interest and utilization of talents and training, with over 60 percent of both groups finding their job dull or so-so and more than 50 percent feeling that their talents are used little or not at all (see Table 6).

VI. FUEL STORAGE SUPERVISORS CLUSTER. This group of 81 airmen serve as firstline supervisors of storage functions. Approximately 55 percent of the average percent time spent by this group is on supervisory and accounting and administrative duties, while a major percentage of the remaining time is spent on tasks relating to the storage of fuels. A majority of these personnel are 7-skill levels with considerable career field experience. Although 36 percent are assigned to 5-skill level authorizations, most of these have 7-skill level primaries and are engaged in some supervisory functions (see Table 4). Over 85 percent perform such tasks as:

- Make entries on Fuel System Discrepancy and Inspection Record forms (AFTO Form 39) for storage operations
- Inspect issuing or receiving hoses
- Inspect grounding or bonding cables
- Prepare APRs
- Make entries on Bulk Storage Summary forms (AF Form 1233)
- Make entries on Record of Receipts forms (AF Form 1231)
- Plan work assignments
- Determine work priority
- Supervise Fuel Specialists (AFSC 63150) personnel
- Counsel personnel on personal or military related problems

Two-thirds of this group feel that their job is interesting, while 78 percent felt that their talents were used at least fairly well, and 90 percent felt that their training was used fairly well or better. Personnel in this group also were relatively high in reenlistment intentions, with 73 percent responding that they would or probably would reenlist.

VII. SERVICE STATION OPERATORS CLUSTER. This small group of 19 airmen is very heterogeneous in terms of tasks performed. Only two tasks are common to 95 percent or more of these personnel. These are issue ground products from base service stations and issue automotive oil from base service stations. Other tasks common to over 50 percent of this group include a number of storage tasks such as:

- Make entries on Fuels Issue/Defuel Document (DOD) forms (AF Form 1994)
- Gauge tanks for fuel quantity and temperature
- Make entries on Fuel System Discrepancy and Inspection Records forms (AFTO Form 390) for storage operations
- Set warning signs during receipt of bulk fuels
- Review Fuels Issue/Defuel Document (DOD) forms (AF Form 1994)
- Perform "return to bulk" operations
- Position drip pans
- Position safety equipment, such as fire extinguishers
- Inspect grounding or bonding cables

The personnel in this group were mostly first-term airmen. Their average service time was 31 months. None of the 19 incumbents found their job interesting. In fact, 63 percent found it dull, while the remainder felt it was so-so. Although 89 percent felt that their talents were used little or not at all, 53 percent felt that their training was used fairly well or better.

VIII. LIQUID OXYGEN (LOX) STORAGE PERSONNEL CLUSTER. Although Liquid Oxygen functions were performed by personnel in some of the other functional groups, the storage and handling of Liquid Oxygen (LOX) was the primary function for this group of 14 airmen. These personnel were assigned to a variety of commands, both in CONUS and overseas. Although two of the 14 were 3-skill level, a majority were 5-skill level with considerable experience in the career field. Although a number of tasks from other duty areas were performed by personnel in this group, the LOX functions are clearly the major job functions, both in terms of percent members performing and average percent time spent. Several tasks were performed by all members of this group. These included:

- Transfer LOX to oxygen carts
- Maintain LOX storage areas
- Inventory LOX products
- Accept Liquid Oxygen (LOX) from commercial or military sources
- Perform operator maintenance on LOX tanks

Other tasks which were characteristic of this group included:

- Sample LOX carts
- Make entries on Systems/Equipment Status Record forms (AFTO Form 244)
- Maintain LOX hoses
- Coordinate LOX equipment maintenance with environmental systems functions
- Perform periodic quality control inspections of LOX products

Although job interest was rather low for this group (see Table 6), it was somewhat higher than for most of the other nonsupervisory storage groups. Use of talents and training was also slightly better than for other groups performing comparable jobs. Notice also that the reenlistment intentions for this group are relatively high as compared to other job type groups identified.

IX. FUELS DISTRIBUTION AND FUEL CONTROL UNIT SUPERVISORS CLUSTER. Typically this group of 177 airmen serve as supervisors of Fuels Distribution functions, Fuels Control Centers, or in some cases as Fuel Controllers within the Fuels Control Center. Eighty-nine percent supervise one or more subordinates, with 79 percent supervising three or more. Most of the remaining personnel work in the Fuels Control Center as nonsupervisory controllers. Generally, this is a heterogeneous group of first level supervisors in terms of the nature and scope of technical functions directed, grouped together by a number of common supervisory and control center tasks. Typically these tasks include:

- Supervise Fuel Specialists (AFSC 63150) personnel
- Direct mobile fueling operations
- Drive sedans or pickup trucks
- Prepare APRs
- Counsel personnel on personal or military related problems
- Make entries on Daily Fuels Request and Servicing Log forms (AF Form 824)
- Review Fuels Issue/Defuel Document (DOD) forms (AF Form 1994)
- Supervise Apprentice Fuel Specialist (AFSC 63130) personnel
- Determine work priorities
- Direct utilization of equipment
- Plan work assignments

Although the clustering procedures identified several job type groups within this cluster, these groups only tend to emphasize the fact that although Fuel Distribution Supervisors and Fuels Control Center functions are often quite similar in terms of the supervisory and management tasks performed, other tasks may vary considerably from one job to another.

Slightly over half of this group are 5-skill level airmen, with most of the remainder 7-skill level. The relatively high average service and average grade level of this group (see Table 5) indicate that this group is composed of personnel who are beginning to assume supervisory and management responsibilities, but who as first line supervisors also often perform various technical tasks.

X. FUEL OPERATIONS SUPERVISORS CLUSTER. The 195 personnel in this cluster serve as the top level NCOICs of fuel functions at a base, with most being supervisors of major fuel functions, such as Fuel distribution, fuel storage, fuel controller, fuel accounting, or fuel quality control. Typically these personnel are 7-skill level; however, also included in this group are a majority of the 9-skill level personnel and CEMs responding to the survey. These personnel perform a number of supervisory functions which are common to most supervisory positions. A number of supervisory tasks are performed by this group which are not characteristic of other supervisory groups identified in this survey. These include:

- Evaluate inspection reports or procedures
- Write correspondence
- Establish organizational policies, office instructions, or standard operating procedures
- Evaluate safety programs
- Evaluate suggestions
- Supervise Fuel Supervisors (AFSC 63170)
- Evaluate quality control procedures
- Conduct staff meetings

Conversely, these personnel perform few technical tasks as evidenced by the fact that 88 percent of their average time spent is on supervisory and accounting and administrative functions (see Table 4). Job interest, as expected, is much higher for this group than for many of the other groups. Over 80 percent found their job interesting and over 90 percent indicated that their talents and training were used fairly well or better. Twenty-nine percent indicated that they would retire with 20 or more years of service. Fifty-eight percent said they would reenlist.

XI. QUALITY CONTROL TECHNICIANS-SUPERVISORS CLUSTER. This small group of 11 personnel serve as supervisors of Quality Control functions. Although all supervise one or more subordinates and perform a number of supervisory functions relative to the management of personnel, the primary functions performed relate to the performance of Quality Control functions. Primary tasks which differentiate this cluster from other supervisory and managerial jobs include:

- Direct quality control programs
- Evaluate quality control procedures
- Evaluate compliance with performance standards
- Evaluate inspection reports or procedures
- Inspect reported discrepancies
- Conduct external inspection of organizational fuel tanks
- Review fuel and equipment sampling frequencies
- Evaluate administrative forms, files, or procedures
- Evaluate safety programs

All but one of the individuals in this group found their job interesting and felt that their talents were used at least fairly well. All felt that their training was used fairly well or better.

XII. FUEL CONTROLLERS CLUSTER. Typically the 44 personnel in this cluster work in the Fuel Control Center. These personnel are primarily 5-skill levels and are in their second enlistment. They perform an average of only 19 tasks. Although these jobs are quite heterogeneous, there were 10 tasks which were characteristic of the group and which accounted for approximately half of the average time spent. These tasks were:

- Make entries on Daily Fuels Request and Servicing Log forms (AF Form 824)
- Maintain status boards, charts, or graphs
- Dispatch fuel requests
- Review Daily Fuels Request and Servicing Log forms (AF Form 824)
- Direct mobile fueling operations
- Review Fuels Issue/Defuel Document (DOD) forms (AF Form 1994)
- Direct utilization of equipment
- Review Fuels Issue/Defuel Document (non-DOD) forms (AF Form 1995)
- Determine work priorities
- Make Jet Fuel Identaplate forms (DD Form 1896)

Only 64 percent of this group felt that their job was interesting; however, 76 percent felt that their talents were used fairly well or better while 84 percent felt that their training was used fairly well or better. Although all were eligible to reenlist, only 57 percent indicated that they would.

XIII. FUEL TRAINING NCOs CLUSTER. In this career ladder, a number of NCOs have been selected to conduct training programs for fuels personnel. This cluster included 47 of these training personnel. Characteristically these personnel are Staff Sergeants who have an average of over 12 years in the career field (see Table 5). Typical tasks performed include:

- Prepare training records, charts, or graphs
- Develop lesson plans
- Administer tests
- Counsel trainees on training progress
- Determine OJT training requirements
- Conduct OJT
- Direct or implement training programs other than OJT
- Conduct training conferences or briefings
- Prepare training schedules
- Score tests
- Write training reports
- Maintain training equipment
- Develop training aids

Most of this group are experienced fuels personnel who are in their second or later enlistment; however, 62 percent are working in 5-skill level positions. Although somewhat below many of the supervisory groups in job satisfaction and perceived utilization of talents and training, these personnel are considerably higher in these factors than the Fuel Distribution and Storage Operators. Sixty-six percent also indicate that they plan to reenlist (see Table 6).

XIV. QUALITY CONTROL LABORATORY PERSONNEL CLUSTER. The 120 personnel in this group comprised the most homogeneous cluster of the entire survey. Essentially members concentrated on performance of tasks from duty I (Performing Quality Control Functions), with 66 percent of their average time spent on these tasks (see Table 4). Although some members of this group performed tasks related to fuels distribution or storage, their primary job involved the laboratory testing of fuels for quality. Typically over 90 percent of the respondents in this cluster perform such tasks as:

- Make entries on Base Fuels Sampling and Testing Record forms (AFTO Form 150)
- Draw samples using in-line samples
- Clean laboratory testing equipment
- Perform aeronautical engineering laboratory (AEL) water tests
- Perform total solid sediment tests of fuel using in-line methods
- Perform total solid sediment tests of fuel using bottle method
- Perform time filtrations
- Perform fuel system ice inhibitor (FSII) freeze point tests
- Perform visual checks for sulphides in water
- Store laboratory equipment

The individuals in this group have varying degrees of service, ranging from E-3s with less than one year in the career field to E-7s with over 18 years service. Fifty-eight percent, however, are in their first enlistment (see Table 5). In comparison to mobile distribution and storage personnel, this group finds their jobs much more interesting. In addition, talents and

training utilization was considerably higher than that reported for the fuel distribution and storage groups (see Table 6). Intentions to reenlist were also considerably higher for this group than for many of the other groups with large percentages of first-term airmen.

XV. FUELS ACCOUNTING PERSONNEL CLUSTER. An important function of this career ladder is to maintain up-to-date records of fuel receipts, issues, and fuel on hand. The 167 members of this cluster review various forms and records prepared by storage and issue personnel and accomplish the fuel accounting function. As shown in Table 4, typically these personnel spend a majority of their work time (70 percent) in performing tasks within duty E (Performing Accounting and Administrative Functions). Tasks which are representative of work performed and which are performed almost exclusively by members of this group include:

- Make entries on General Purpose Creation forms (AF Form 1991)
- Input data from General Purpose Creation forms (AF Form 1991) to computer
- Cross check data from manual records with Daily Transaction Register forms (D06/800-41)
- Cross check data from manual records with Daily Document Register (D04/804-50)
- Cross check data from manual records with Daily Fuels Management Data report (D05/856-77)
- Cross check data from manual records with (monthly) Fuels Inventory Adjustment Document Register (M22/842-72)
- Maintain document control files
- Coordinate fuel accounting matters with Accounting and Finance

In addition to tasks which are essentially exclusive to this group, high percentages also review a number of forms originated by fuels distribution and storage personnel and which are reviewed by subsequent levels of supervision. These tasks included:

- Review Physical Inventory (Fuels/Missile Propellants) forms (AF Form 1235)
- Review Fuels Issue/Defuel Document (DOD) forms (AF Form 1994)
- Review Fuels Issue/Defuel Document (non-DOD) forms (AF Form 1995)
- Review Inventory (Fuels/Missile Propellants) forms (AF Form 1237)
- Review Bulk Storage Summary forms (AF Form 1233)
- Review Record of Receipts forms (AF Form 1231)

Like the Quality Control Laboratory group (XIV), over half of the group are in their first enlistment, with an average grade for the group slightly above E-4. Skill levels range from 3- to 7-level, with 20 percent 3-skill, 68 percent 5-skill, and 12 percent 7-skill levels. As shown in Table 6, job interest and utilization of talents and training are relatively high and comparable to those of the Quality Control Laboratory personnel.

Sixty-four percent of this group plan to reenlist, which, although below the average of some of the more experienced supervisory groups, is considerably better than reenlistment intentions for Fuels Distribution and Storage specialists.

Summary

As shown in the Fuels career ladder structure diagram (Figure 1), there are four major divisions of jobs represented in this career ladder.

The first, Mobile Distribution and Storage, includes those personnel concerned with the physical handling of fuels. Primary tasks include the operation of mobile equipment such as refuelers or fuel transports, hydrant systems, and fuel transfer equipment associated with the receipt, storage, and distribution of fuel. The primary knowledges and skills required are related to the operation and operator maintenance of mechanical systems involved in these functions. Fifty-four percent of the survey sample were performing these types of jobs.

The second division includes jobs where the primary knowledges and skills exercised are those associated with supervision and OJT functions. These functions were performed by 21 percent of the survey sample.

Quality Control personnel, accounting for approximately five percent of the survey respondents, perform tasks which require the conduct of a variety of laboratory tests to assure that fuels used by the Air Force meet the rigid specifications required.

Also performing a unique function were those individuals assigned to the administrative function of Fuels Accounting. Eight percent of survey respondents were working in this function.

TABLE 4
PERCENT TIME SPENT ON DUTIES BY CLUSTER AND IJT GROUPS

DUTY	MOBILE DISTRIBUTION SYSTEMS OPERATOR	PREVENTIVE MAINTENANCE AND DISTRIBUTION NCOS	DISTRIBUTION AND STORAGE SYSTEMS OPERATORS	TECHNICAL SCHOOL INSTRUCTORS	FUEL STORAGE		FUEL STORAGE		SERVICE STATION OPERATORS	LIQUID OXYGEN (LOX) STORAGE PERSONNEL
					OPERATORS	SUPERVISORS	OPERATORS	SUPERVISORS		
A ORGANIZING AND PLANNING	*	10	2	1	1	15	1	1	1	7
B DIRECTING AND IMPLEMENTING	2	13	3	7	2	14	3	3	3	5
C INSPECTING AND EVALUATING	*	5	1	1	1	10	1	1	1	1
D TRAINING	*	3	1	29	*	5	*	5	*	2
E PERFORMING ACCOUNTING AND ADMINISTRATIVE FUNCTIONS	5	9	10	9	7	10	13	10	13	9
F PERFORMING STORAGE FUNCTION	11	6	33	20	61	32	55	32	55	18
G PERFORMING DISTRIBUTION FUNCTIONS	73	48	38	30	11	3	12	3	12	7
H PERFORMING LIQUID OXYGEN (LOX) FUNCTIONS	1	*	3	0	7	5	1	5	1	37
I PERFORMING QUALITY CONTROL FUNCTIONS	1	1	4	1	2	1	*	1	*	7
J PERFORMING MISSILE PROPELLANT AND CRYOGENIC FLUID FUNCTIONS	*	*	*	0	1	*	1	*	0	2
K SUPPLEMENTAL TASKS	9	5	5	2	7	3	12	3	12	3

*LESS THAN ONE PERCENT

TABLE 4 (CONTINUED)
PERCENT TIME SPENT ON DUTIES BY CLUSTER AND IJT GROUPS

DUTY	FUEL DISTRIBUTION AND FUEL CONTROL UNIT SUPERVISORS		FUEL OPERATIONS SUPERVISORS		QUALITY CONTROL TECHNICIANS- SUPERVISORS		FUEL CONTROLLERS		FUEL TRAINING NCOS		QUALITY CONTROL LABORATORY PERSONNEL		FUEL ACCOUNTING PERSONNEL	
A ORGANIZING AND PLANNING	13		23		16		14		17		5		7	
B DIRECTING AND IMPLEMENTING	23		22		22		24		12		5		5	
C INSPECTING AND EVALUATING	10		21		34		4		7		3		3	
D TRAINING	7		8		3		1		58		2		2	
E PERFORMING ACCOUNTING AND ADMINISTRATIVE FUNCTIONS	14		14		8		28		2		3		70	
F PERFORMING STORAGE FUNCTIONS	3		2		2		*		*		3		2	
G PERFORMING DISTRIBUTION FUNCTIONS	25		5		1		23		1		8		3	
H PERFORMING LIQUID OXYGEN (LOX) FUNCTIONS	*		*		1		0		0		1		*	
I PERFORMING QUALITY CONTROL FUNCTIONS	*		3		7		*		0		66		*	
J PERFORMING MISSILE PROPELLANT AND CRYOGENIC FLUID FUNCTIONS	*		*		*		0		0		*		*	
K SUPPLEMENTAL TASKS	5		2		6		5		4		4		7	

*LESS THAN ONE PERCENT

TABLE 5
COMPARISON OF BACKGROUND INFORMATION FOR CLUSTER AND IJT GROUPS

DUTY	MOBILE DISTRIBUTION SYSTEMS OPERATOR	PREVENTIVE MAINTENANCE AND DISTRIBUTION NCOS	DISTRIBUTION AND STORAGE SYSTEMS OPERATORS	TECHNICAL SCHOOL INSTRUCTORS	FUEL STORAGE OPERATORS	FUEL STORAGE SUPERVISORS	SERVICE STATION OPERATORS	LIQUID OXYGEN (LOX) STORAGE PERSONNEL
PERCENT OF SAMPLE:	29%	4%	6%	*	10%	4%	1%	1%
SKILL LEVEL:								
63130	50%	11%	31%	-	42%	1%	42%	14%
63150	50%	71%	66%	80%	54%	36%	58%	64%
63170	-	18%	3%	20%	4%	63%	-	22%
63190	-	-	-	-	-	-	-	-
63100	-	-	-	-	-	-	-	-
AVERAGE GRADE:	3.3	4.3	3.6	4.8	3.5	5.4	3.4	4.2
AVERAGE MONTHS IN SERVICE:	27	71	46	-	37	146	31	65
PERCENT MEMBERS IN FIRST ENLISTMENT:	94%	43%	68%	-	84%	3%	95%	50%
AVERAGE NUMBER OF TASKS PERFORMED:	32	51	78	64	48	80	24	50

*LESS THAN ONE PERCENT

TABLE 5 (CONTINUED)
COMPARISON OF BACKGROUND INFORMATION FOR CLUSTER AND LIT JOB GROUPS

	FUEL DISTRIBUTION AND FUEL CONTROL UNIT SUPERVISORS	FUEL OPERATIONS SUPERVISORS	QUALITY CONTROL TECHNICIANS- SUPERVISORS	FUEL CONTROLLERS	FUEL TRAINING MCOS	QUALITY CONTROL LABORATORY PERSONNEL	FUEL ACCOUNTING PERSONNEL
PERCENT OF SAMPLE:	8%	9%	1%	2%	2%	5%	8%
SKILL LEVEL:							
63130	2%	-	-	7%	-	17%	20%
63150	51%	12%	-	84%	62%	67%	68%
63170	47%	75%	91%	9%	38%	15%	12%
63190	-	17%	9%	-	-	2%	-
63100	-	6%	-	-	-	-	-
AVERAGE GRADE:	5.2	6.6	6.4	4.4	5.2	4.2	4.2
AVERAGE MONTHS IN SERVICE:	119	207	194	70	128	67	61
PERCENT MEMBERS IN FIRST ENLISTMENT:	6%	*	-	39%	11%	58%	60%
AVERAGE NUMBER OF TASKS PERFORMED:	56	83	32	19	44	63	50

*LESS THAN ONE PERCENT

TABLE 6
JOB INTEREST, PERCEIVED UTILIZATION OF TALENTS AND TRAINING, AND
REENLISTMENT INTENTIONS FOR CLUSTER AND IJT GROUPS
(PERCENT RESPONDING)

	MOBILE DISTRIBUTION SYSTEMS OPERATOR	PREVENTIVE MAINTENANCE AND DISTRIBUTION NCOS	DISTRIBUTION AND STORAGE SYSTEMS OPERATORS	TECHNICAL SCHOOL INSTRUCTORS	FUEL STORAGE OPERATORS	FUEL STORAGE SUPERVISORS	SERVICE STATION OPERATORS	LIQUID OXYGEN (LOX) STORAGE PERSONNEL
<u>EXPRESSED JOB INTEREST:</u>								
DULL	32	19	23	0	31	16	63	7
SO-SO	33	28	33	20	30	16	37	36
INTERESTING	34	52	43	80	38	67	0	57
NOT REPORTED	1	1	1	0	1	1	0	0
<u>PERCEIVED UTILIZATION OF TALENTS:</u>								
LITTLE OR NOT AT ALL	54	33	26	0	52	22	89	29
FAIRLY WELL OR BETTER	45	66	64	100	47	78	11	71
NOT REPORTED	1	1	0	0	1	0	0	0
<u>PERCEIVED UTILIZATION OF TRAINING:</u>								
LITTLE OR NOT AT ALL	14	19	15	0	18	9	47	21
FAIRLY WELL OR BETTER	85	81	85	100	81	90	53	79
NOT REPORTED	1	0	0	0	1	1	0	0
<u>REENLISTMENT INTENTIONS:</u>								
I PLAN TO RETIRE AFTER 20 OR MORE YEARS SERVICE	0	2	2	10	1	14	0	0
NO OR PROBABLY NO	59	32	44	0	57	11	47	14
YES OR PROBABLY YES	39	65	53	90	40	73	53	86
NOT REPORTED	2	1	1	0	2	2	0	0

TABLE 6 (CONTINUED)

JOB INTEREST, PERCEIVED UTILIZATION OF TALENTS AND TRAINING, AND REENLISTMENT
INTENTIONS FOR CLUSTER AND LTJ
(PERCENT RESPONDING)

	FUEL DISTRIBUTION AND FUEL CONTROL UNIT SUPERVISORS	FUEL OPERATIONS SUPERVISORS	QUALITY CONTROL TECHNICIANS- SUPERVISORS	FUEL TRAINING NCOS	QUALITY CONTROL LABORATORY PERSONNEL	FUEL ACCOUNTING PERSONNEL
<u>EXPRESSED JOB INTEREST:</u>						
DULL	16	6	0	9	8	9
SO-SO	27	12	9	15	12	12
INTERESTING	56	81	91	74	80	78
NOT REPORTED	1	1	0	2	0	1
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
LITTLE OR NOT AT ALL	22	9	9	19	20	17
FAIRLY WELL OR BETTER	77	90	91	81	80	82
NOT REPORTED	1	1	0	0	0	1
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
LITTLE OR NOT AT ALL	14	7	0	17	8	11
FAIRLY WELL OR BETTER	84	92	100	83	91	89
NOT REPORTED	2	1	0	0	0	0
<u>REENLISTMENT INTENTIONS:</u>						
I PLAN TO RETIRE AFTER 20						
YEARS SERVICE	6	29	18	0	5	2
NO OR PROBABLY NO	13	12	18	17	38	33
YES OR PROBABLY YES	80	68	64	66	54	64
NOT REPORTED	1	1	0	0	3	1

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 analysis. This analysis compares differences in jobs performed by personnel at various skill-level proficiencies and provides a basis for evaluation of the various career ladder documents including AFR 39-1 Specialty Descriptions and the Specialty Training Standard (STS).

Typically, 3-skill level Fuel Specialists perform an average of 38 tasks, most concerning the mobile distribution and storage functions. As shown in Table 7, 70 percent of the average percent time spent by this group is within these two duty areas, with the distribution function consuming over twice the time spent on storage. As reflected in this table, ten percent of the time of this group is spent on accounting and administration functions and an additional ten percent on supplemental tasks. Other functions occupy only small percentages of this groups time. The distribution of skill level personnel by assignment, as shown in Table 8, illustrates more graphically the assignment patterns by skill level. As shown, over half of the 3-skill level personnel are assigned to mobile distribution units, an additional 18 percent to bulk storage, and from three to five percent to each of the other major assignment locations.

The 5-skill level specialist performs an average of 48 tasks, ten more than the 3-skill level, indicating a somewhat broader job at the 5-skill level. As shown in Table 7, supervision and training functions become more important at the 5-skill level, occupying approximately 20 percent of the groups average percent time spent compared to only three percent at the 3-skill level. Accounting and administration and quality control functions also occupy more time at the 5-skill level than at the 3-skill level. These general trends are also reflected in assignment patterns for 5-skill level personnel, as shown on Table 8. Higher percentages of the 5-skill level personnel are assigned to jobs in the Fuels Control Center, Fuels management, and Quality Control Laboratory than is true for 3-skill level personnel.

As in most career ladders, 7-skill level personnel spend a majority of their work time on supervision and training (See Table 7). However, since many of these personnel serve as supervisors of such functions as Mobile Distribution Units, Bulk Storage, Fuels Control Centers, and Quality Control Laboratories, they spend some time in performing technical tasks associated with these functions. In addition, as shown in Table 9, many of these personnel operate the primary equipment common to the specialty skill levels in this ladder.

Personnel working in 9-skill level and CEM positions spend essentially full time on management and accounting and administration functions (See Table 7). Both of these groups serve primarily as Fuels Superintendents or managers at base or wing level, with only five percent of the 9-skill level group (two individuals) and 28 percent of the CEM group (five individuals) serving in MAJCOM Fuels Superintendent positions (See Table 8). Others from these two skill levels performed very specialized jobs, normally at a MAJCOM or HQ USAF level.

TABLE 7
PERCENT TIME SPENT ON DUTIES BY DAFSC GROUPS

DUTIES	3-SKILL LEVEL	5-SKILL LEVEL	7-SKILL LEVEL	9-SKILL LEVEL	CEM
A ORGANIZING AND PLANNING	1	6	17	21	27
B DIRECTING AND IMPLEMENTING	2	8	19	20	25
C INSPECTING AND EVALUATING	*	3	14	22	20
D TRAINING	*	4	9	5	6
E PERFORMING ACCOUNTING AND ADMIN FUNCTIONS	10	15	14	20	15
F PERFORMING STORAGE FUNCTIONS	21	16	7	3	2
G PERFORMING DISTRIBUTION FUNCTIONS	49	35	11	2	2
H PERFORMING LIQUID OXYGEN (LOX) FUNCTIONS	2	2	1	*	*
I PERFORMING QUALITY CONTROL FUNCTIONS	4	6	4	5	1
J PERFORMING MISSILE PROPELLANT AND CRYOGENIC FLUIDS FUNCTIONS	*	*	*	-	*
K SUPPLEMENTAL TASKS	10	7	4	1	1

* LESS THAN .5 PERCENT

TABLE 8

DISTRIBUTION OF DAFSC SKILL LEVEL PERSONNEL BY ASSIGNMENT LOCATION

<u>ASSIGNMENT LOCATION</u>	<u>PERCENT MEMBERS ASSIGNED BY SKILL LEVEL</u>				
	<u>3-SKILL</u> <u>(N=592)</u>	<u>5-SKILL</u> <u>(N=1,157)</u>	<u>7-SKILL</u> <u>(N=395)</u>	<u>9-SKILL</u> <u>(N=39)</u>	<u>CEM</u> <u>(N=18)</u>
BULK STORAGE	18	17	16	-	-
FUELS CONTROL CENTER	5	11	7	-	6
FUELS MANAGEMENT	5	10	18	69	50
GROUND PRODUCTS	3	2	*	-	-
MOBILE DISTRIBUTION UNIT	53	39	34	3	-
PUMPING STATION	5	3	1	-	-
QUALITY CONTROL LABORATORY	4	7	12	13	-
MAJCOM FUELS SUPERINTENDENT OR CEM	-	-	-	5	28
OTHERS	<u>7</u>	<u>10</u>	<u>12</u>	<u>15</u>	<u>16</u>
	100	100	100	100	100

TABLE 9

EQUIPMENT OPERATED BY 20 PERCENT OR MORE BY DAFSC GROUPS

<u>EQUIPMENT</u>	<u>3-SKILL LEVEL</u>	<u>5-SKILL LEVEL</u>	<u>7-SKILL LEVEL</u>	<u>9-SKILL LEVEL</u>	<u>CEM</u>
PASSENGER SEDANS OR LIGHT PICKUPS	68	65	65	41	28
R5 OR R9 REFUELERS	77	64	43	18	6
C-300 TANK TRUCKS	52	47	35	8	6
MH2 HOSE CARTS	50	42	30	8	0
R8 REFUELERS	44	39	27	5	6
A2 DEMINERALIZED WATER TRUCKS	41	35	23	3	0
TRUCK CARGO 3/4 TO 1 1/2 TONS	29	28	30	8	6

COMPARISON OF SURVEY DATA TO AFR 39-1 SPECIALTY DESCRIPTIONS

Survey data for the 631X0 career ladder were compared to the AFR 39-1 Specialty Descriptions, dated 30 April 1981. These descriptions are intended to provide a broad overview of the duties and tasks required to be performed at the various skill levels of the DAFSC. Overall, the descriptions for the Specialist (63110, 63130 and 63150), the Supervisor (63170), and the Superintendent (63190 and 63100) were found to provide a clear, concise overview of the major duties and tasks performed by incumbents in each of these skill levels.

ANALYSIS OF EXPERIENCE (TAFMS) GROUPS

In addition to the skill level analysis, survey respondents were examined on the basis of months of Total Active Federal Military Service (TAFMS). Results of this analysis reveal changes in jobs and job perceptions as personnel gain experience in the service and in the career field. Specifically, this analysis aids in identifying duties and tasks performed by personnel at various stages in their career progression and assists the more junior airmen to better visualize the kinds of jobs available during their progression within the Fuels career ladder.

As in most career ladders, there is a gradual increase in time spent on supervision and management as personnel gain experience in the career ladder (see Table 10). Generally, airmen in their first enlistment perform technical tasks relative to the receipt, storage, and distribution of fuel. A proportionate number, however, are assigned to the rather specialized areas of the career field such as Fuels accounting and the Fuels Laboratory. A very small number work in preventive maintenance. Table 11 shows the distribution of first enlistment personnel within the various job groups identified in the career field analysis. A comparison of this distribution to the distribution of the remaining career field members as shown in Table 12 provides additional insight as to avenues of progression for personnel who remain in the ladder past the first enlistment.

First Enlistment Analysis

First enlistment personnel were also examined on the basis of both common tasks performed and common equipment operated. Since a majority of these personnel worked in mobile distribution units or in fuel storage areas, the most common tasks relate to these functions. Table 13 lists those tasks which are common to 50 percent or more of the first enlistment group, while Table 14 lists tasks common to 30 to 47 percent or more of this group. These 36 tasks may be considered as the common core tasks for this group. As shown in Table 15, the most common equipment operated was R5 or R9 refuelers operated by 72 percent of these respondents. Equipment other than that listed on the table was operated by less than 20 percent of these personnel.

Another item of interest to training personnel was with regard to the number of personnel engaged in specialized refueling and defueling operations. Table 16 shows the percentage of first term personnel who perform these refueling procedures or techniques. As reflected in the table, only Combat Turnaround was performed by as many as 30 percent of the first term personnel. Since many of these techniques are somewhat unique to commands, a further discussion of this subject can be found in the Analysis of Major Command Differences and Training sections of the report.

Although not representative of the first enlistment group since only 16 percent of first term members were assigned, the specialized areas of Fuel Accounting and Fuel Laboratory jobs are shown below with tasks representative of these functions.

Fuel Accounting

- Review Fuels Issue/Defuel document (DOD) forms (AF Form 1994)
- Review Physical Inventory (Fuels/Missile Propellants) forms (AF Form 1235)
- Review Bulk Storage Summary forms (AF Form 1233)
- Review Inventory (Fuels/Missile Propellants) forms (AF Form 1237)
- Make entries on General Purpose Creation forms (AF Form 1991)
- Review Record of Receipts forms (AF Form 1231)

Fuel Laboratory

- Make entries on Base Fuels Sampling and Testing Record forms (AFTO Form 150)
- Draw samples using in-line samplers
- Clean laboratory testing equipment
- Perform aeronautical engineering laboratory (AEL) water tests
- Perform total solid sediment tests of fuel using in-line methods
- Perform time filtrations
- Perform colorimetric tests

In view of the unique skills and knowledges involved in the performance of these two functions, as compared to other Fuels jobs, it is important to note that only six to eight percent of the first enlistment group are assigned to each of these functions. Further discussion of these two unique functions will be discussed in other sections of this report.

Analysis of Job Satisfaction

Job satisfaction indices for personnel in the first enlistment (1-48 months TAFMS), second enlistment (49-96 months TAFMS), and career (97+ months TAFMS) groups were also examined. Job interest, perceived utilization of talents and training, and reenlistment intentions are presented in Table 17, with the comparative data for personnel in similar career ladders surveyed in 1980. (These included 13,923 respondents from career ladders in the 511XX, 552XX, 554XX, 555XX, 566XX, 602XX, 605XX, 611XX, 622XX, and 751XX career fields.) Comparison of this job satisfaction data for this career field,

with averages across the above career fields, reveals some quite significant differences between personnel in the first enlistment groups. Considerably fewer first enlistment Fuels personnel found their job interesting and their talents utilized fairly well or better than first enlistment members of the comparative group. Considerably more Fuels personnel, however, felt that their job utilized their training fairly well or better than members of the comparative group. This would seem to imply that Fuels personnel felt that they were doing the job for which they were trained, but that it was not really interesting or a challenge to apply their talents. Even so, Fuel personnel in each enlistment period indicated a higher intent to reenlist than their counterparts in other career fields.

TABLE 10
RELATIVE PERCENT TIME SPENT ON DUTIES BY TAFMS GROUPS

<u>DUTIES</u>	1ST ENLIST 1-48 MONTHS (N=1,268)	2ND ENLIST 49-96 MONTHS (N=309)	CAREER 97+ MONTHS (N=628)
A ORGANIZING AND PLANNING	2	9	16
B DIRECTING AND IMPLEMENTING	3	13	18
C INSPECTING AND EVALUATING	1	5	13
D TRAINING	1	5	9
E PERFORMING ACCOUNTING AND ADMINISTRATIVE FUNCTIONS	12	16	14
F PERFORMING STORAGE FUNCTIONS	20	12	8
G PERFORMING DISTRIBUTION FUNCTIONS	46	26	13
H PERFORMING LIQUID OXYGEN (LOX) FUNCTIONS	2	2	1
I PERFORMING QUALITY CONTROL FUNCTIONS	5	5	4
J PERFORMING MISSILE PROPELLANT AND CRYOGENIC FLUIDS FUNCTIONS	*	*	*
K SUPPLEMENTAL TASKS	9	7	4

* LESS THAN ONE PERCENT

TABLE 11

JOB DISTRIBUTION OF FIRST ENLISTMENT 631X0 AIRMEN N=1,268

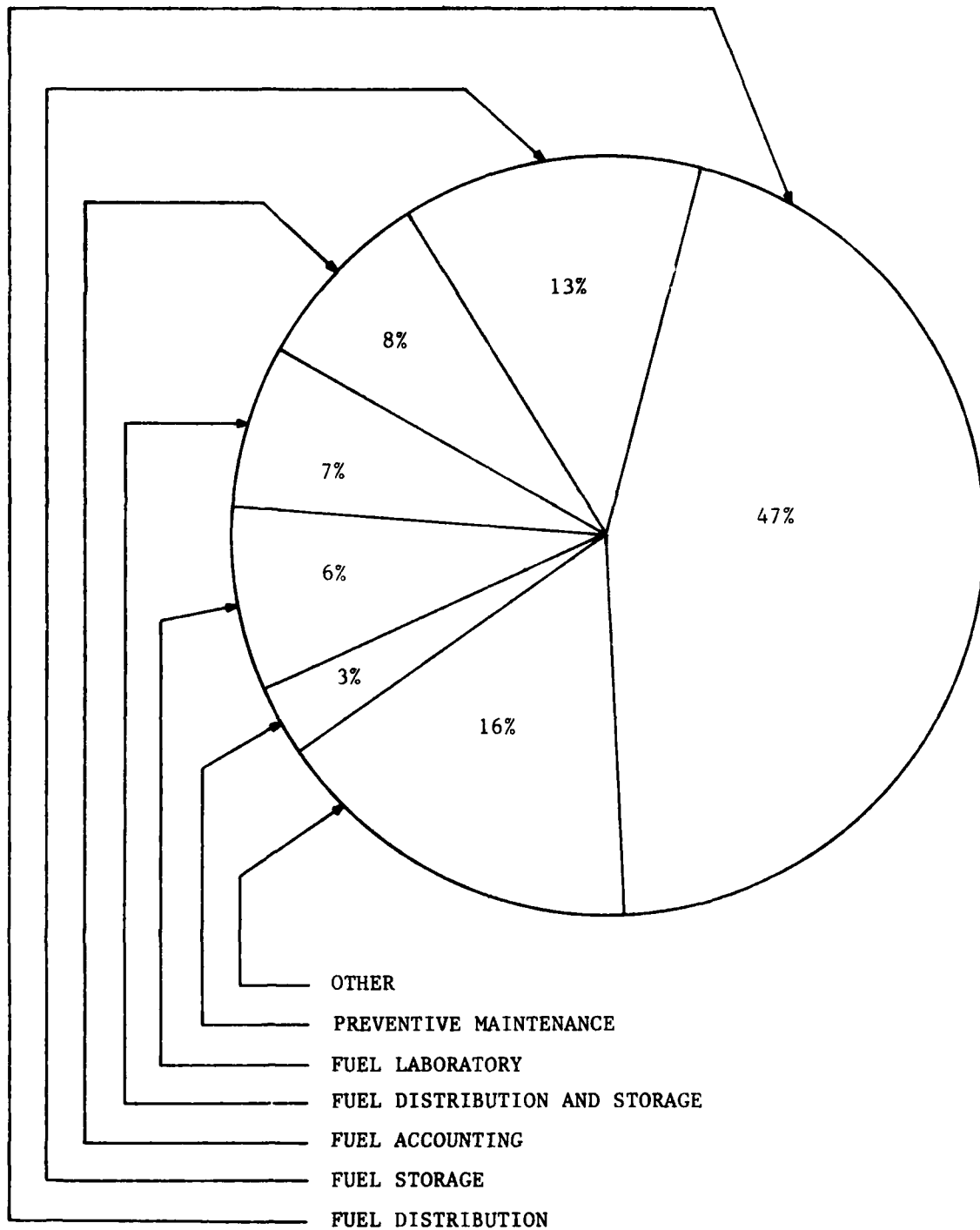


TABLE 12
JOB DISTRIBUTION OF FUELS PERSONNEL IN
SECOND AND LATER ENLISTMENTS (N=940)

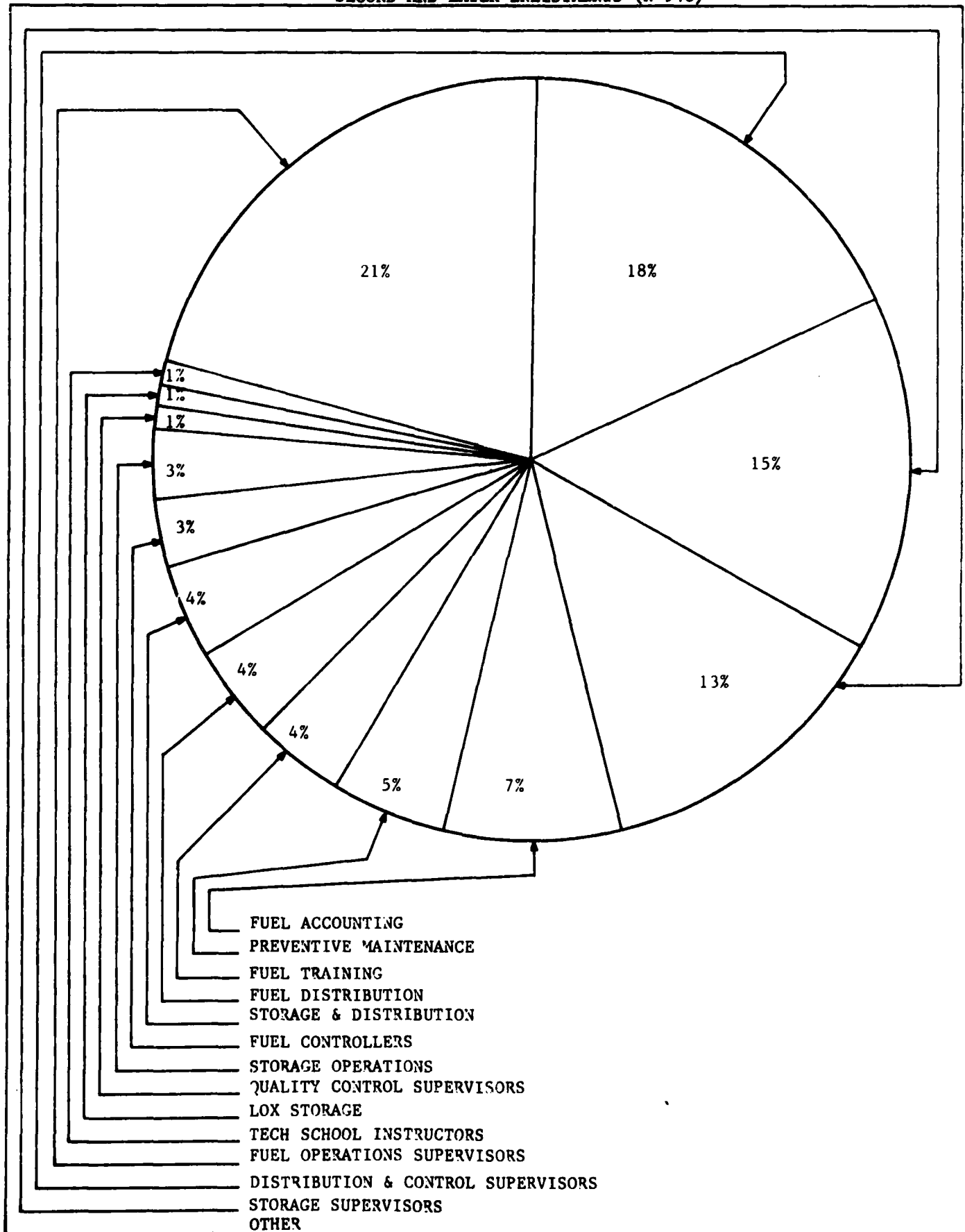


TABLE 13

ALL TASKS PERFORMED BY 50 PERCENT OR MORE FIRST-TERM PERSONNEL

<u>TASKS</u>	<u>PERCENT PERFORMING</u>
G259 GROUND REFUELING EQUIPMENT	71
G253 DRIVE SEDANS OR PICKUP TRUCKS	71
G272 MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	69
K405 PERFORM "RETURN TO BULK" OPERATIONS	67
G270 MAKE ENTRIES ON FILTER SEPARATOR PRESSURE DIFFERENTIAL LOG FORMS (AFTO FORM 422) DURING ISSUE	64
G258 FILL MOBILE REFUELING UNITS FROM BULK STORAGE	64
K408 PROOF PUNCHED CARDS	63
G247 BOND REFUELING EQUIPMENT	62
G273 MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD) FORMS (AF FORM 1995)	61
G248 CHECK REFUELING EQUIPMENT	59
G250 DEFUEL AIRCRAFT	59
G274 MAKE ENTRIES ON OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (FUEL SERVICING) FORMS (AFTO FORM 371)	58
G290 OPERATE R-5 TANK TRUCKS	58
G292 OPERATE R-9 TANK TRUCKS	56
K395 FILL MOBILE REFUELING UNITS FROM HYDRANT SYSTEM	53
G255 DRIVE TANK TRUCKS	52
G266 ISSUE GROUND PRODUCTS USING MOBILE REFUELING UNITS	51

TABLE 14

ALL TASKS PERFORMED BY 30 TO 47 PERCENT OF FIRST-TERM PERSONNEL

TASKS	PERCENT PERFORMING
F205 BOND MOBILE REFUELING UNITS TO FILL STANDS	47
G275 MAKE ENTRIES ON OPERATORS INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) FORMS (AFTO FORM 374)	44
G254 DRIVE SMALL TRUCKS (UNDER 5 TONS)	44
E149 MAKE ENTRIES ON BULK FUEL ISSUE/DEFUEL SUMMARY FORMS (AF FORM 1232)	43
F220 INSPECT GROUNDING OR BONDING CABLES	43
G291 OPERATE R-8 TANK TRUCKS	39
G279 OPERATE MH2 HOSE CARTS	39
F221 INSPECT ISSUING OR RECEIVING HOSES	38
G307 PERFORM SPARK CHECKS ON MOBILE REFUELING EQUIPMENT	38
F235 POSITION DRIP PANS	38
F212 EMPTY DRIP PANS	36
F241 SET OR REMOVE CHOCKS ON TANK TRUCKS OR TRAILERS	36
F215 GAUGE TANKS FOR FUEL QUANTITY AND TEMPERATURE	34
F228 MAKE ENTRIES ON FUEL SYSTEM DISCREPANCY AND INSPECTION RECORD FORMS (AFTO FORM 39) FOR STORAGE OPERATIONS	33
E184 REVIEW FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	32
G260 INSPECT VEHICLES OTHER THAN THOE ASSIGNED TO LIQUID OXYGEN (LOX) FUNCTIONS	30
G293 OPERATE REFUELING VEHICLES OTHER THAN HYDRANT HOSE TRUCKS	30
G260 INSPECT VEHICLES OTHER THAN THOSE ASSIGNED TO LIQUID OXYGEN (LOX) FUNCTIONS	30
G263 ISSUE DEMINERALIZED WATER TO AIRCRAFT FROM TANK TRUCKS	30

TABLE 15

EQUIPMENT OPERATED BY 20 PERCENT OR MORE FIRST ENLISTMENT PERSONNEL

<u>EQUIPMENT OPERATED</u>	<u>PERCENT OPERATING</u>
R-5 OR R-9 REFUELERS	72
PASSENGER SEDAN OR LIGHT PICKUP	67
R-8 REFUELERS	42
A2 DEMINERALIZED WATER TRUCKS	38
TRUCK CARGO, 3/4 TO 1 1/2 TONS	28

TABLE 16

REFUELING PROCEDURES/TECHNIQUES PERFORMED
BY FIRST ENLISTMENT PERSONNEL

<u>PROCEDURE/TECHNIQUE PERFORMED</u>	<u>PERCENT PERFORMING</u>
COMBAT TURNAROUND	30
MULTIPLE AIRCRAFT REFUELING	25
HOT DEFUELING	24
MULTI-SOURCE REFUELING	18
INTEGRATED COMBAT TURNAROUND	14
HOT COMBAT TURNAROUND	13
TAB VEE (SHELTERED) REFUELING	13

TABLE 17

**JOB INTEREST AND PERCEIVED UTILIZATION OF TALENTS AND TRAINING FOR TAFMS GROUPS
(PERCENT RESPONDING)**

	1ST ENLIST		2ND ENLIST		CAREER	
	1-48 MONTHS (N=1,268)	COMP DATA	49-97 MONTHS (N=309)	COMP DATA	97+ MONTHS (N=628)	COMP DATA
<u>EXPRESSED JOB INTEREST:</u>						
DULL	30	20	15	16	10	12
SO-SO	28	21	28	20	17	16
INTERESTING	41	58	57	62	73	71
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
LITTLE OR NOT AT ALL	49	36	24	30	17	23
FAIRLY WELL OR BETTER	50	63	76	70	82	77
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
LITTLE OR NOT AT ALL	16	29	12	29	12	24
FAIRLY WELL OR BETTER	83	70	88	70	87	75
<u>REENLISTMENT INTENTIONS:</u>						
I PLAN TO RETIRE AFTER 20 OR MORE YEARS SERVICE	0		0		17	
NO OR PROBABLY NO	57	58	26	38	10	26
YES OR PROBABLY YES	41	40	73	61	89	72

NOTE: COLUMNS MAY NOT ADD UP TO 100 PERCENT DUE TO "NO RESPONSE"

ANALYSIS OF MAJOR COMMAND DIFFERENCES

In those career ladders where incumbents work in a variety of commands, an analysis of command groups is performed to determine whether there are differences in duty or task performance patterns, equipment utilization, or job satisfaction which would warrant modification of training, changes in classification or assignment practices, or to alert management to unique command problems. Since a majority of the personnel in this ladder are in their first enlistment and since this group contains airmen in the formative stages of their career, the first enlistment group has been used for comparison.

A review of relative percent time spent on duties by first enlistment personnel in the various commands (see Table 18) reveals no major differences in utilization by major commands. Although there are some variations in percent time spent on the various duties, in all instances the primary functions performed are mobile distribution and storage, with smaller percentages of time spent on other functions.

Table 19 shows a comparison of equipment operation by first-term airmen in each command. All equipment operated by 20 percent or more of any command group has been listed. The operation of R-5 and R-9 refuelers is common to all commands. In addition, R-8 refuelers and three-fourths to one and one half ton cargo trucks are also operated by over 20 percent of the individuals in all commands except ATC. Sedans or pickups, C-300 tank trucks, A-2 demineralized water trucks and MH-2 hosecarts are operated by significant percentages of the personnel in all commands. Only in AFSC were F-6S tank trucks and ML-1 water/alcohol trailers operated by any significant percentage of command personnel. The Alaskan Air Command is the primary user of C301 or M-49 "M" series fuel trucks; however, PACAF and TAC also have significant numbers operating this equipment.

As previously discussed, Fuels personnel are involved in a number of Refueling Procedures/Techniques such as Combat Turnaround, Hot Combat Turnaround, and Multi-source Refueling. As shown in Table 20, Combat Turnaround is used by a rather large number of first-term personnel in all commands except MAC and ATC. Multiple Aircraft Refueling is also used by 20 percent or more of the first-term personnel in all commands but AFSC. The remaining procedures, although performed to some extent in all commands, are somewhat unique to one command. For example, SAC predominates in Hot Defueling, USAFE in Integrated Combat Turnaround, AAC in Multi-source Refueling and USAFE is the primary user of the TAB-VEE/Sheltered Refueling Technique. The relatively high usage of the Combat Turnaround, Multiple Aircraft Refueling, and Hot Defueling suggests that possibly these procedures should be considered for training in the basic course. Further discussion of these functions, therefore, will be included in the Training section of this report.

Responses to job satisfaction questions are summarized in Table 21. SAC and MAC had the highest percentage of personnel who felt that their job was interesting with TAC and AFSC personnel showing the lowest job interest. PACAF had the lowest percentage reporting that their talents were used fairly well or better with 42 percent. MAC had the highest, (59 percent). The

other commands ranged between these two extremes with the majority around 50 percent. Over three-fourths of the personnel in each command however, indicated that their training was used fairly well or better. Although there is some correlation between job interest and plans to reenlist, there are often factors which overshadow job interest when making plans to remain in service. This seems to be the case in regards to the PACAF group. Although only 39 percent reported that their job was interesting, 54 percent planned to reenlist. In other commands however, there seemed to be a relatively high correlation between these two factors.

TABLE 18

RELATIVE PERCENT TIME SPENT ON DUTIES
BY FIRST ENLISTMENT PERSONNEL IN EACH MAJCOM

DUTIES	SAC (N=372)	TAC (N=317)	MAC (N=181)	PACAF (N=65)	USAF (N=172)	ATC (N=67)	AAC (N=38)	AFSC (N=44)
A ORGANIZING AND PLANNING	2	2	3	1	3	2	1	2
B DIRECTING AND IMPLEMENTING	3	3	3	1	3	3	2	7
C INSPECTING AND EVALUATING	1	*	1	*	1	*	1	1
D TRAINING	1	1	1	1	1	*	*	*
E PERFORMING ACCOUNTING AND ADMIN FUNCTIONS	11	13	12	12	13	15	10	11
F PERFORMING STORAGE FUNCTIONS	21	20	19	15	19	17	28	18
G PERFORMING DISTRIBUTION FUNCTIONS	45	45	44	57	45	48	43	47
H PERFORMING LIQUID OXYGEN (LOX) FUNCTIONS	3	2	3	*	*	2	2	*
I PERFORMING QUALITY CONTROL FUNCTIONS	6	4	8	3	4	5	4	5
J PERFORMING MISSILE PROPELLANT AND CRYOGENIC FLUIDS FUNCTIONS	*	*	1	*	*	*	*	*
K SUPPLEMENTAL TASKS	8	10	8	9	10	7	8	8

*LESS THAN ONE PERCENT

TABLE 19

EQUIPMENT OPERATED BY 20 PERCENT OR MORE OF
FIRST TERM PERSONNEL BY COMMAND
(PERCENT RESPONDING)

<u>EQUIPMENT</u>	<u>SAC</u>	<u>TAC</u>	<u>MAC</u>	<u>PACAF</u>	<u>USAFE</u>	<u>ATC</u>	<u>AAC</u>	<u>AFSC</u>
C-300 TANK TRUCK	61	52	50	35	49	52	29	50
F-6S TANK TRUCK	3	11	16	14	6	8	11	34
M4-1 WATER/ALCOHOL TRAILER	1	2	3	3	2	3	8	23
PASSENGER SEDAN OR LIGHT PICKUP	68	64	72	72	69	48	71	75
TRUCK CARGO, 3/4 to 1 1/2 TONS	33	27	28	22	24	6	37	39
A-2 DEMINERALIZED WATER TRUCKS	68	22	18	40	23	28	47	46
C301 OR M49 "M" SERIES FUEL TRUCKS	9	20	6	34	11	10	63	16
MH2 HOSECARTS	68	23	62	59	26	31	42	57
R-5 OR R-9 REFUELERS	71	75	69	74	71	76	76	75
R8 REFUELERS	44	48	55	59	21	5	32	39

TABLE 20

REFUELING PROCEDURES/TECHNIQUES PERFORMED BY
FIRST-TERM PERSONNEL BY COMMAND
(PERCENT RESPONDING)

<u>PROCEDURE/TECHNIQUES PERFORMED</u>	<u>SAC</u>	<u>TAC</u>	<u>MAC</u>	<u>PACAF</u>	<u>USAFE</u>	<u>ATC</u>	<u>AAC</u>	<u>AFSC</u>
COMBAT TURNAROUND	24	40	8	35	45	9	63	34
MULTIPLE AIRCRAFT REFUELING	21	27	28	35	20	36	42	16
HOT DEFUELING	54	10	11	8	16	18	24	9
INTEGRATED COMBAT TURNAROUND	12	13	3	17	31	8	18	14
MULTI-SOURCE REFUELING	16	15	19	23	16	16	45	25
HOT COMBAT TURNAROUND	8	23	7	15	13	8	8	11
TAB-VEE/SHELTERED REFUELING	6	11	5	19	42	8	5	7

TABLE 21

JOB SATISFACTION DATA FOR FIRST-TERM PERSONNEL BY MAJCOM GROUPS
(PERCENT RESPONDING)

	<u>SAC</u>	<u>TAC</u>	<u>MAC</u>	<u>PACAF</u>	<u>USAFE</u>	<u>ATC</u>	<u>AAC</u>	<u>AFSC</u>
<u>I FIND MY JOB:</u>								
DULL	29	32	29	34	34	31	26	32
SO-SO	20	31	21	26	26	27	37	30
INTERESTING	50	36	48	39	40	42	37	36
<u>MY JOB UTILIZES MY TALENTS:</u>								
NOT AT ALL OR VERY LITTLE	49	54	40	55	47	48	53	50
FAIRLY WELL OR BETTER	50	45	59	42	53	52	47	48
<u>MY JOB UTILIZED MY TRAINING:</u>								
NOT AT ALL OR VERY LITTLE	15	22	12	17	13	15	11	21
FAIRLY WELL OR BETTER	85	78	86	80	87	82	86	77
<u>I PLAN TO REENLIST:</u>								
NO, PLAN TO RETIRE	0	0	0	0	0	0	0	0
NO OR PROBABLY NO	54	60	55	40	59	54	71	73
YES OR PROBABLY YES	43	38	43	54	37	42	29	20

NOTE: COLUMNS MAY NOT ADD UP TO 100 PERCENT DUE TO "NO RESPONSE"

ANALYSIS OF LEVELS OF EXPERIENCE BY FUNCTIONAL AREAS

During the development of the survey instrument, one area of concern to some supervisors and managers was identified. These individuals felt that the unique jobs of Fuels Accounting and Quality Control Laboratory Technicians should be shredded at the 3- and 5-skill levels. This would allow specific training and job progression in these areas. Proponents contended that this would provide a method whereby supervisors and managers could insure that new acquisitions for vacancies in the Accounting or Quality Control Laboratory would have either formal training or experience in the area. In addition, if assigned to a shred, personnel would compete for promotions on the basis of like job knowledge and experience rather than on the full scope of the Fuels career ladder. Another perception was that once individuals are assigned to one of these specialized areas, they tend to remain in that area for long periods of time rather than moving to other kinds of jobs. In order to determine movement of personnel through the various functional area jobs within the career ladder, a background question was included to collect data regarding experience in each of several typical job assignments. This data has been analyzed and forms the basis for the following discussion.

Approximately six percent of the respondents to the survey indicated that they worked as Fuels Accountants. Almost all of these are 3- or 5-skill level personnel. As shown in Table 22, these personnel have experience in a variety of fuels functions besides accounting, indicating that there is a tendency for personnel to move from one functional area to another. The same trend is evident for the five percent of the sample who worked as Quality Control Specialists (see Table 23). A review of other functional areas revealed that, generally, individuals assigned have experience in at least one and sometimes a number of other functional areas indicating that there is generally some rotation of assignments. This is especially true for personnel who have been in the career field for some time and who are assigned to supervisory positions. Naturally, those individuals who are in their first enlistment have had less opportunity to gain experience in a variety of functions than those with longer service.

Table 24 presents a comparison, by percent, of personnel assigned to the primary functional areas to the percentage of personnel who report one year or more experience in each of the functional areas. In all areas, there are about twice as many personnel available in the career ladder who have a year or more experience in a function than there are jobs to be filled. This also is an indication that there has been considerable job rotation within the career ladder in the past and that this trend is likely to continue.

During the analysis of this data, a number of senior NCOs were contacted concerning the merits of shreds for Accounting and Quality Control Laboratory jobs. Arguments against shredding, brought out in their discussions, included the fact that assignments to these two functions, particularly Accounting, provides some variety of assignment for personnel who find some of the other functions quite dull and unrewarding. In addition, these functions, particularly Accounting, provide an opportunity for

acquiring knowledges and skills that are very valuable to supervisors as they transition from the more manual skills of handling refueling and storage equipment to clerical and administrative skills involved in supervising or managing fuels systems. Consequently, although recognizing that shredding the ladder at the lower skill levels might resolve some of the training problems presently encountered, these personnel feel that shreds would limit present assignment and utilization flexibility, force specialization, and generally create more problems than they would resolve.

On the other hand, the functions performed by Quality Control Laboratory personnel and Fuels Accounting personnel require considerably different knowledges and skills than those required of personnel in Fuels Distribution and Storage. This is especially true of the Fuels Accounting job which involves the application of a considerable body of clerical and administrative rules and regulations associated with the maintenance of accurate accounting records of fuel transactions. In addition, these personnel must have knowledge of the automated computerized systems associated with the supply system in order to input, receive, and interpret computer products dealing with fuel accounting. Proponents of shredding point out that due to the relatively small number of personnel assigned to the Accounting function (about six to eight percent of the specialty), promotion tests are heavily weighted toward tasks performed by Storage and Distribution functions. Consequently, Accounting personnel are at a disadvantage when testing for promotion. A somewhat similar situation exists for personnel assigned to the Fuels Laboratory; however, these personnel, although performing quite different tasks, are much more closely associated with the Distribution and Storage functions than those individuals working in the Accounting functions.

In consideration of the present structure and utilization of personnel in this career ladder, shredding does not appear to be needed. At present, there are two 3AZR courses designed to train personnel in Aviation Fuels Monitoring (3AZR61350-1) and Aviation Fuels Accounting (3AZR63150-2). Upon completion of these courses and six months experience in the respective areas, personnel may be awarded the SE1 039 for Aviation Fuels Monitor or the SE1 040 for the Aviation Fuels Accounting. These specialized training courses, along with the OJT programs and the present level of experience in these functions within the career ladder, should normally provide sufficient employees capable of performing these important functions without resorting to shredding the specialty.

TABLE 22

EXPERIENCE OF FUEL ACCOUNTANTS IN OTHER FUEL FUNCTIONAL AREAS
(PERCENT RESPONDING)

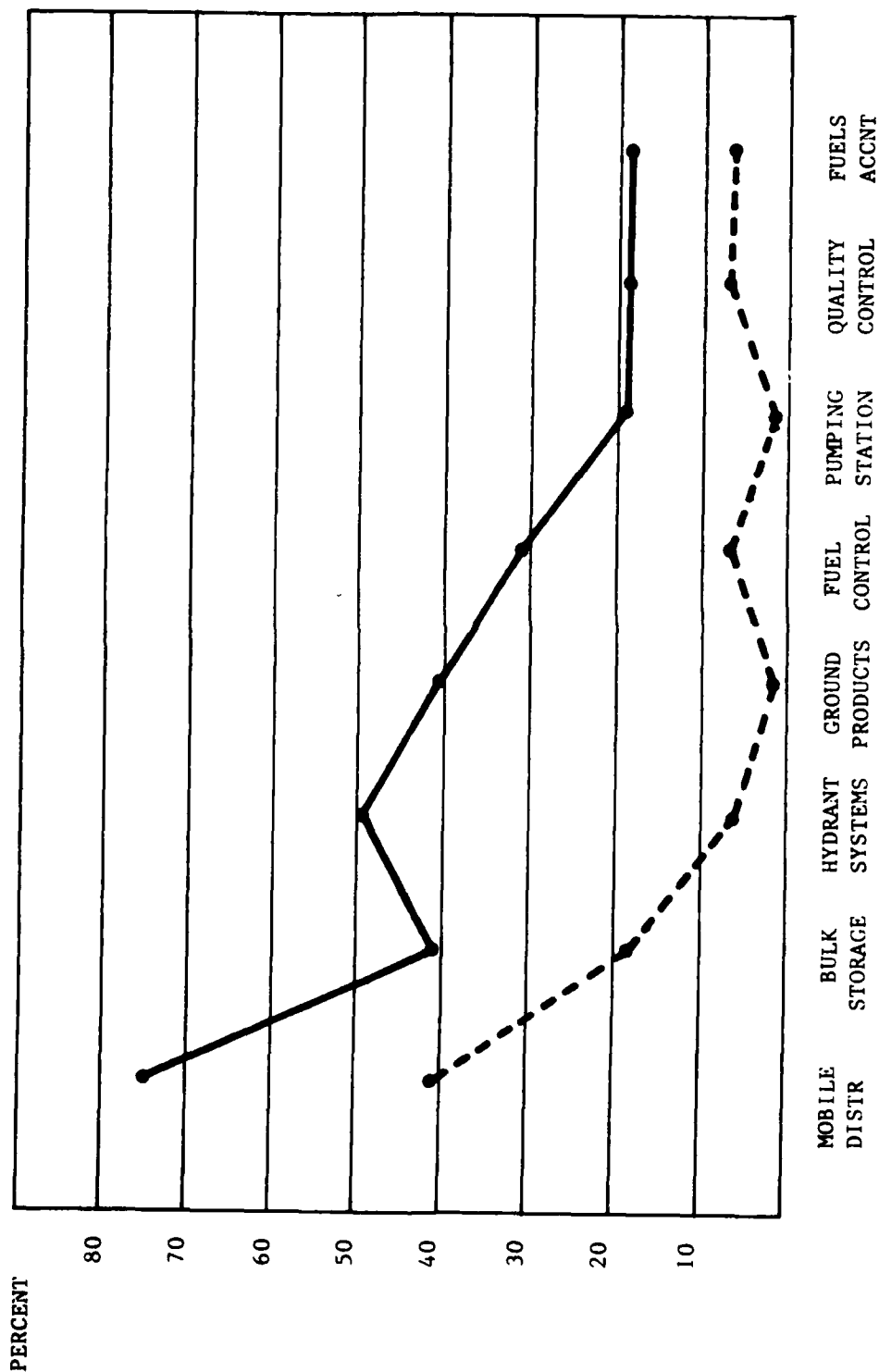
	<u>LESS THAN 6 MONTHS</u>	<u>7-11 MONTHS</u>	<u>OVER 1 YEAR</u>
BULK STORAGE	32	12	12
ACCOUNTING	25	22	46
FUELS CONTROL	15	3	11
FUELS MANAGEMENT	7	9	9
GROUND PRODUCTS	26	9	20
MAJCOM FUELS SPEC OR SUPVRS	-	3	4
MOBILE DISTRIBUTION UNIT	31	15	37
PUMPING STATION	24	9	1
QC LAB	16	6	5
HYDRANT SECTION	25	10	12

TABLE 23

EXPERIENCE OF QC TECHNICIANS IN OTHER FUEL FUNCTIONAL AREAS
(PERCENT RESPONDING)

	<u>LESS THAN 6 MONTHS</u>	<u>7-11 MONTHS</u>	<u>OVER 1 YEAR</u>
BULK STORAGE	27	19	12
ACCOUNTING	13	2	4
FUELS CONTROL	21	8	12
FUELS MANAGEMENT	3	1	1
GROUND PRODUCTS	15	13	23
MAJCOM FUELS SPEC OR SUPVRS	-	2	15
MOBILE DISTRIBUTION UNIT	12	19	59
PUMPING STATION	27	6	9
QC LAB	33	24	37
HYDRANT SYSTEM	25	9	23

TABLE 24
COMPARISON OF JOB DISTRIBUTION TO QUALIFIED
PERSONNEL FOR TOTAL SAMPLE



CURRENTLY PERFORMING IN FUNCTION -----
1 YR OR MORE EXPERIENCE IN FUNCTION -----

TRAINING ANALYSIS

Occupational survey data is one of the major sources of information which can be used to assist in the development of training programs relevant to the needs of first enlistment personnel. Factors to be considered in establishing training requirements or evaluating existing courses include the percent of first enlistment (1-48 months TAFMS) members performing tasks, along with training emphasis and task difficulty ratings as provided by senior NCOICs in the career ladder. (For a more detailed discussion of Training Emphasis and Task Difficulty, see the Task Factor Administration discussion in the Survey Methodology section of this report). These factors were used in evaluating the Specialty Training Standard (STS) and the Plan of Instruction (POI) for the 631X0 career ladder. Technical School personnel from the Chanute Technical Training Center matched inventory tasks to appropriate sections of the STS and to the POI for course C3ABR63130. This matching provided the basis for determining the appropriateness of the STS as well as the training provided in the basic course. A complete computer listing reflecting the percent members performing, training emphasis ratings, and task difficulty ratings for each task statement along with STS and POI matching has been forwarded to the Technical School for their use in a further detailed review of training documents. A summary of that information is described below.

Training Emphasis

Of the 408 tasks in the inventory, 83 were rated as tasks requiring high training emphasis. Of these, 30 tasks were performed by 30 percent or more of the first enlistment group. These tasks are listed on Table 25 and should form the nucleus of the basic Fuels course or other structured training.

Five additional tasks were performed by 30 percent or more of the first enlistment group. These included:

- Drive small trucks (under 5 tons)
- Empty drip pans
- Fill mobile refueling units from hydrant system
- Inspect vehicles other than those assigned to liquid oxygen (LOX) functions
- Perform spark checks on mobile refueling equipment

These tasks were rated above average in training emphasis and should also be considered for structured training. Note that the vast majority of the tasks rated highest in training emphasis by senior fuels personnel were tasks concerned with fuel distribution and storage, jobs that high percentages of the first-enlistment group normally perform. Because of the variety of jobs performed by the remainder of the first-enlistment personnel (see the Career Ladder Structure and TAFMS Analysis sections), tasks performed in other kinds of jobs are so specialized that only small percentages of first term personnel are likely to encounter them. Consequently, the inclusion of such tasks in the basic course would normally not be cost effective. This is especially true for tasks exclusive to the Fuels Laboratory, Fuels Accounting, and Fuels Control Center functions. Although many of the tasks represented

in these kinds of jobs were rated above average in training emphasis, indicating that some form of structured training is desirable, this training should be limited to those individuals who are assigned to these functions.

Task Difficulty

Of the 408 tasks in the inventory, 220 were rated above average in difficulty (5.00 or higher). The majority of these tasks were in the areas of supervision, inspection and management, Fuels Laboratory procedures and accounting, and the set-up and operation of Air Transportable Fueling systems such as R-14 AHS, R-25 AHS, and R-22 AHS. None of these tasks were performed by as many as 30 percent of the first-term personnel. Tasks rated below average generally related to the operation of most of the more common types of fuels distribution and storage equipment, completion of the routine fuels record forms, taking fuel samples, and performing operator maintenance on distribution and storage equipment.

Specialty Training Standard (STS)

A comprehensive review of STS 631X0, dated May 1977, was accomplished comparing the STS items to survey data where applicable. Assistance in accomplishing this review was received from subject matter specialists at the Chanute Technical Training Center who matched inventory tasks with STS items. This matching provides a means of directly associating task performance with STS items. Since many of the items related to general knowledge requirements, these could not be directly associated with specific tasks and were, therefore, not evaluated.

In general, the STS covers essentially all of the major functions of the career ladder identified by the survey data. However, due to the relatively large number of different functional areas in which personnel in this specialty work, many of the STS items were applicable to very low percentages of personnel.

One area that should be considered for addition to the STS is the Refueling Procedures and Techniques performed. Although some of the procedures and techniques are command specific in application and involve small percentages of the overall specialty, others are applicable across several commands and involve substantial percentages of the Fuels population. Consequently, this area should be explored in any STS review. (See Table 20 and related discussion in the Analysis of Major Command Differences section.)

Plan of Instruction (POI)

During the time the survey was being administered in the field, subject matter specialists from the Chanute Technical Training Center matched the inventory tasks to the criterion objectives in the C3ABR63130 POI, dated 1 August 1980. From this matching, a computer product was prepared displaying the tasks matched with the various criterion objectives, along with Training Emphasis and Task Difficulty ratings and percentages of the first

job group (1-24 months TAFMS) and the first enlistment group (1-48 months TAFMS) performing each task.

Generally, criterion objectives of the POI are fully justified by task data, both in terms of the relatively high Training Emphasis and percent of first term personnel performing. One area, however, which may warrant review is the training provided in Block II of the POI (Permanently Installed Hydrants and Air Transportable Systems). The data generally supports instruction on Permanently Installed Hydrants, since approximately half operate one or more hydrant systems. However, since there are a variety of hydrant systems in use in the Air Force, and since only a small number of operators are required at each base where hydrant systems are installed, only small percentages of the first term personnel operate any one of these systems. These percentages are shown below.

<u>PERMANENT HYDRANT SYSTEMS OPERATED</u>	<u>PERCENT FIRST- TERM OPERATING</u>	<u>TRAINING EMPHASIS RATING</u>
Pritchard	23	5.49
Modified Panero	16	5.53
Panero	13	5.40
Phillips	6	4.82

The small number of personnel operating any of the Air Transportable systems indicates that training such systems is somewhat questionable since it is applied by less than 20 percent of the first enlistment group. The percent of first enlistment personnel operating the various Air Transportable systems are as shown below:

<u>AIR TRANSPORTABLE SYSTEMS OPERATED</u>	<u>PERCENT FIRST- TERM OPERATING</u>	<u>TRAINING EMPHASIS RATING</u>
R-14 ATHS	4	3.61
R-22 ATHS	3	2.63
R-25 ATHS	4	2.63
R-26 ATHS	4	2.70

In addition, training emphasis is low on these tasks indicating that possibly this training should be deleted from the basic course. In view of these findings, this training should be reviewed at the Utilization and Training Workshop with view toward its elimination.

As mentioned in the STS analysis, certain Refueling procedures or techniques are performed by significantly larger percentages of the first enlistment group than are operating Air Transportable Hydrant Systems. Although these functions are command oriented, some training in the basic theories and/or procedures might be appropriate. This also should be an item for discussion in a utilization and training workshop.

TABLE 25

TASKS RATED HIGH IN TRAINING EMPHASIS FOR FIRST TERM FUELS SPECIALISTS

TASKS	TRAINING EMPHASIS	TASK DIFFICULTY	PERCENT PERFORMING
G248 CHECK REFUELING EQUIPMENT	7.25	4.49	59
G292 OPERATE R-9 TANK TRUCKS	7.21	4.66	56
G290 OPERATE R-5 TANK TRUCKS	7.12	4.58	58
G274 MAKE ENTRIES ON OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (FUEL SERVICING) FORMS (AFTO FORM 371)	6.96	4.13	58
G250 DEFUEL AIRCRAFT	6.95	4.89	59
G272 MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	6.89	4.21	69
G273 MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD) FORMS (AF FORM 1995)	6.89	4.46	61
G259 GROUND REFUELING EQUIPMENT	6.88	2.41	21
G275 MAKE ENTRIES ON OPERATORS INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) FORMS (AFTO FORM 374)	6.82	4.07	44
G291 OPERATE R-8 TANK TRUCKS	6.82	4.64	39
G258 FILL MOBILE REFUELING UNITS FROM BULK STORAGE	6.81	3.86	64
F215 GAUGE TANKS FOR FUEL QUANTITY AND TEMPERATURE	6.79	3.69	33
G255 DRIVE TANK TRUCKS	6.77	4.43	52
G247 BOND REFUELING EQUIPMENT	6.63	2.53	62
F205 BOND MOBILE REFUELING UNITS TO FILL STANDS	6.61	2.47	48
F228 MAKE ENTRIES ON FILTER SEPARATOR PRESSURE DIFFERENTIAL LOG FORMS (AFTO FORM 422) DURING RECEIPT	6.58	2.73	34
G270 MAKE ENTRIES ON FILTER SEPARATOR PRESSURE DIFFERENTIAL LOG FORMS (AFTO FORM 422) DURING ISSUE	6.42	3.12	64
G279 OPERATE MH2 HOSE CARTS	6.40	4.20	39
F220 INSPECT GROUNDING OR BONDING CABLES	6.28	3.08	43
G266 ISSUE GROUND PRODUCTS USING MOBILE REFUELING UNITS	6.11	4.13	51
F221 INSPECT ISSUING OR RECEIVING HOSES	6.00	3.33	38
K408 POSITION SAFETY EQUIPMENT, SUCH AS FIRE EXTINGUISHERS	5.91	3.56	63
G293 OPERATE REFUELING VEHICLES OTHER THAN HYDRANT HOSE TRUCKS	5.68	4.64	30
E149 MAKE ENTRIES ON BULK FUEL ISSUE/DEFUEL SUMMARY FORMS (AF FORM 1232)	5.44	4.46	43
G263 ISSUE DEMINERALIZED WATER TO AIRCRAFT FROM TANK TRUCKS	5.40	3.90	30
K405 PERFORM "RETURN TO BULK" OPERATIONS	5.28	4.59	67
F241 SET OR REMOVE CHOCKS ON TANK TRUCKS OR TRAILERS	5.25	2.02	36
F235 POSITION DRIP PANS	5.23	1.61	38
G253 DRIVE SEDANS OR PICKUP TRUCKS	5.23	3.14	71
E184 REVIEW FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	5.14	4.38	32

*AVERAGE T.E. = 2.9 (S.D. = 1.9)

**AVERAGE T.D. = 5.0 (S.D. = 1.0)

ANALYSIS OF WRITE-INS

At the end of each survey are blank pages where respondents may write in additional tasks performed, equipment used, special training received, or individual comments about the career field. These comments are categorized and tabulated to identify recurring items that may provide additional insight into tasks performed, equipment operated, or other items that were not covered in the inventory. In addition, airmen often use this space to record individual comments they may have about the career ladder.

In this survey, 331 respondents wrote in one or more items of information. Most of these pertained to individual situations, such as training received, unique job titles, specialized tasks, or other similar information. Only a small percentage of the write-ins were significant to the analysis of this career ladder. These are summarized below:

I. Perform Multiple Jobs (17 Respondents). In the background section of the inventory, respondents were asked to choose one job title and one duty location that best described their present job and present duty assignment. These 17 individuals worked in jobs which required them to work in two or more functional areas and perform tasks which would normally be covered by two or more job titles. In some cases, respondents were located at small bases or sites where the workload and authorizations prohibited specialization.

"Due to the circumstances of being at a remote, everybody lends a hand on mobile distribution - I help do some lab work."

"As of the present time I am the only 631X0 military assigned. . . I have to do all jobs assigned."

"NCOIC Aux Field - Supervisor of distribution, storage, fuels control center, and preventive maintenance operator cryogenic storage."

II. Negative Comments (17 Respondents). As in most surveys, some individuals were quick to point out their criticisms of the career ladder. The most frequent complaints in this category were with regard to the dull, routine nature of many fuels jobs. To some degree, this correlates with job interest and utilization of talents and training information previously discussed. Some of these comments are quoted below as examples of some of the negative aspects of jobs in the fuels ladders.

"An airman in the Fuel career field doesn't get enough training in all the areas of fuel to make the job diversified and interesting. It is nowhere near the "challenge" it is professed to be. The work is simple and tedious. . . The job can be accomplished with very little thought or reasoning . . ."

". . . If this job required more brains, thus making it more of a challenge, I would enjoy it." . . .

"The only way I intend to reenlist is change my career field. . ."

"If I do decide to reenlist it wont be in fuels. I feel that any 10 year old child could do my job . . . I feel like I'm wasting my time."

"The Fuel's career field has not been a challenge to me. I was let down when the actual job performance was accomplished."

"The AFSC description in the career planning manual gives a description of different tasks (Quality Control, Dispatching, Accounting, etc.) to be learned from the basic career field. So far, the knowledge I personally have gained has been quite limited."

III. Performing Auxilliary Tasks (30 Respondents). Survey respondents wrote in a number of general cleaning and grounds maintenance tasks which were not included in the inventory. Although performance of these kinds of tasks are common to many career ladders, many fuel personnel felt that they performed more than their share. To these individuals, performance of these type of tasks was a primary irritant which contributed to the dullness of their job. Some typical comments were:

"Spend majority of duty time doing grounds maintenance"

"(Survey) did not include painting, raking rocks, sweeping, picking up trash and just general nonsense jobs (washing trucks, batteries, painting tires and engines)"

"The job of a fuels specialist should be classified under Civil Engineering as POL (ainting, odd jobs, and landscaping)"

"Odd jobs such as building improvements, cutting grass, picking up paper, washing trucks, sweeping floors, emptying trash cans . . . are what takes up most of my military duty time."

"My job is to do everything that no one else wants to do, including mobile operator, expediter, painter, lawnmower maintenance, sweeping . . . and even babysitting in the barracks."

The remaining write-ins in this category were similar to the above examples with primary emphasis on cutting grass, cleaning and painting facilities and equipment.

IV. Additional Titles Not Included in Survey Background. A number of personnel performed jobs or worked in organizations not included in the background section of the inventory. The two primary jobs not listed were Hydrant Operators (28 respondents) and Preventive Maintenance (23 respondents). Most of the remaining write-ins were unique jobs with only one or two incumbents such as:

HQ USAF Fuels Staff Member
HQ MAC IG Office
Chief, Fuels Management Office (no officer assigned)
MAJCOM Fuels Management Action Officer
Fuels Inspector, HQ SAC IG
MAJCOM Equipment Manager
Chief, MAJCOM Fuels Quality Assurance

Personnel working in Hydrants and Preventive Maintenance jobs were included in the job type cluster analysis since their jobs included many of the distribution and storage functions common to other fuels personnel. Some of the specialized jobs were included in supervisory groups in the cluster analysis due to the similarity of their tasks to other supervisory jobs. Others, however, were so unique that they did not group with any of the recognized job clusters in the cluster analysis.

Summary

In summary, the write-ins received from the respondents provide additional insight into some of the reasons for the somewhat low job satisfaction indices in this career ladder. Also, although personnel are normally assigned to one of the primary fuels functional areas such as distribution, storage, or quality control, a number of fuels personnel, especially those at small installations perform tasks in two or more of these functions. This accounts for some of the overlap in functions identified in the cluster analysis, particularly in the Distribution and Storage Systems Operator cluster where most of the incumbents perform a number of tasks which are characteristic of both storage and distribution. The specialized jobs identified by the specialized job titles also help to explain why a number of personnel were not identified in the job type analysis.

COMPARISON TO PREVIOUS SURVEY

The results of this survey were compared to those of the previous survey of this career field completed in May 1976.

Although there have been some minor changes in the career field since the previous OSR, comparison of the kinds of jobs identified by the career field structure analysis indicates that personnel are still working in essentially the same types of jobs that existed in the 1975-1976 period. Table 26 shows a comparison of the primary kinds of jobs identified in both surveys. Although the inventory was modified considerably for the 1981 survey with a number of additional tasks and background items, the kinds of jobs identified are remarkably similar.

As discussed previously in the Analysis of Experience (TAFMS) groups, job satisfaction for first-term employees in this ladder is somewhat below the average of first-term airmen in comparable career fields surveyed recently. It was gratifying to note, however, that generally personnel in both their first and second enlistments were somewhat better satisfied than comparable groups in 1976 (see Table 27). In addition, higher percentages of second term personnel in the 1981 survey said that they would or probably would reenlist. These percentages, however, were slightly lower for the 1981 first-term employees than that reported in the 1976 data.

TABLE 26

A COMPARISON OF THE PRIMARY KINDS OF JOBS
IN THE 1976 AND 1981 OSRs

KINDS OF JOBS IDENTIFIED IN THE 1976
OCCUPATIONAL SURVEY

SUPERVISORS, NCOICs AND
SUPERINTENDENTS

FUELS AUDITOR

MOBILE DISTRIBUTION AND HYDRANT
FUELING PERSONNEL

HYDRANT FUELER MAINTENANCE

BULK STORAGE

CRYOGENIC SPECIALIST

OJT TRAINER/SUPERVISORS

FLIGHT LINE FUELING DISPATCHERS/
MONITORS

KINDS OF JOBS IDENTIFIED IN THE 1981
OCCUPATIONAL SURVEY

FUELS OPERATIONS SUPERVISORS
FUELS DISTRIBUTION AND FUELS CONTROL
OF UNIT SUPERVISORS
FUELS STORAGE SUPERVISORS
QUALITY CONTROL TECHNICIANS AND
SUPERVISORS

FUELS ACCOUNTING PERSONNEL

MOBILE DISTRIBUTION SYSTEMS OPERATOR
DISTRIBUTION AND STORAGE SYSTEM OPERATOR

PREVENTIVE MAINTENANCE AND DISTRIBUTION
NCOs

FUEL STORAGE OPERATIONS PERSONNEL

LIQUID OXYGEN (LOX) STORAGE PERSONNEL

FUELS TRAINING NCOs

FUELS CONTROLLERS

TABLE 27

COMPARISON OF JOB INTEREST AND PERCEIVED UTILIZATION
OF TALENTS AND TRAINING FOR TAFMS GROUPS*

	<u>1ST ENLISTMENT</u>		<u>2ND ENLISTMENT</u>	
	<u>1-48 MONTHS</u>		<u>49-97 MONTHS</u>	
	<u>TAFMS</u>		<u>TAFMS</u>	
	<u>1976</u>	<u>1981</u>	<u>1976</u>	<u>1981</u>
<u>EXPRESSED JOB INTEREST:</u>				
DULL	43	30	20	15
SO-SO	25	28	22	28
INTERESTING	32	41	58	57
<u>PERCEIVED UTILIZATION OF TALENTS:</u>				
LITTLE OR NOT AT ALL	57	49	36	24
FAIRLY WELL OR BETTER	43	50	64	76
<u>PERCEIVED UTILIZATION OF TRAINING:</u>				
LITTLE OR NOT AT ALL	23	16	21	12
FAIRLY WELL OR BETTER	77	83	79	88
<u>REENLISTMENT INTENTIONS:</u>				
NO OR PROBABLY NO	56	57	31	26
YES OR PROBABLY YES	44	41	69	73

* SOME COLUMNS DO NOT TOTAL TO 100 PERCENT DUE TO SOME INDIVIDUALS
NOT REPORTING

IMPLICATIONS

Generally, the analysis of survey data revealed a very stable career field with no major problems. The 39-1 Specialty Descriptions have been recently revised and reflects the various duties and responsibilities of the specialty. Although the STS is several years old, most of the items are still applicable. Some changes in refueling techniques and procedures, however, may require some STS revisions.

The training conducted in the basic course is generally consistent with the tasks performed by first term personnel and training emphasis ratings by senior technicians. In view of the small number of personnel performing tasks relative to air Transportable Hydrant systems, this training should be reviewed for possible deletion. Some of the refueling procedures/techniques are performed by 30 percent or more of the first-term respondents and may warrant inclusion in the basic course. These possible changes should be discussed in the next utilization and training conference held for this AFSC.

Rather large percentages of first term airmen found their jobs dull or so-so. A majority of these personnel were assigned to mobile distribution or storage operator jobs. Smaller percentages, however, indicated dissatisfaction with their job in this survey than in the survey reported in 1976. Managers and Supervisors should continue to explore methods of further enhancing these jobs to increase job satisfaction levels.

Although differing considerably from other jobs in the Fuels Specialty, Fuels Laboratory personnel and fuels accountants are an integral part of the fuels career ladder. Shreds for either of these jobs would tend to set these personnel apart from the others in the specialty and provide different training and promotion systems. Although initial training presents some problems to supervisors, particularly in accounting, the current single ladder appears to provide managers with the flexibility needed to accomplish the fuels functions through rotation of personnel to the various jobs based on their qualifications, interests, and desires. Since the establishment of the SEIs for these functions, personnel can be tracked who have experience in accounting or the laboratory. This should provide a means for identifying these trained personnel when needed.

Discussions with field personnel reveal that although many are opposed to shredding the specialty, there are a number who still feel that shreds are needed. It is suggested that this topic be addressed in the next utilization and training workshop, with full consideration of the advantages and disadvantages of shreds.

APPENDIX A

REPRESENTATIVE TASKS PERFORMED BY MOBILE DISTRIBUTION SYSTEMS OPERATORS
(GRP177, N=636)

TASKS	PERCENT MEMBERS PERFORMING
GROUND REFUELING EQUIPMENT	97
MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	95
DRIVE SEDANS OR PICKUP TRUCKS	91
DEFUEL AIRCRAFT	91
MAKE ENTRIES ON FILTER SEPARATOR PRESSURE DIFFERENTIAL LOG FORMS (AFTO 422) DURING ISSUE	90
FILL MOBILE REFUELING UNITS FROM BULK STORAGE	87
BOND REFUELING EQUIPMENT	86
MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD) FORMS (AF FORM 1995)	86
MAKE ENTRIES ON OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (FUEL SERVICING) FORMS (AFTO FORM 371)	85
CHECK REFUELING EQUIPMENT	83
OPERATE R-5 TANK TRUCKS	81
OPERATE R-9 TANK TRUCKS	78
DRIVE TANK TRUCKS	78
PERFORM 'RETURN TO BULK' OPERATIONS	77
ISSUE GROUND PRODUCTS USING MOBILE REFUELING UNITS	77
POSITION SAFETY EQUIPMENT, SUCH AS FIRE EXTINGUISHERS	69
FILL MOBILE REFUELING UNITS FROM HYDRANT SYSTEM	66
OPERATE MH2 HOSE CARTS	58
MAKE ENTRIES ON OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) FORMS (AFTO FORM 374)	57
OPERATE R-8 TANK TRUCKS	55
PERFORM SPARK CHECKS ON MOBILE REFUELING EQUIPMENT	55
DRIVE SMALL TRUCKS (UNDER 5 TONS)	55
BOND MOBILE REFUELING UNITS TO FILL STANDS	49
ISSUE DEMINERALIZED WATER TO AIRCRAFT FROM TANK TRUCKS	48
OPERATE REFUELING VEHICLES OTHER THAN HYDRANT HOSE TRUCKS	42
MAKE ENTRIES ON BULK FUEL ISSUE/DEFUEL SUMMARY FORMS (AF FORM 1232)	39
INSPECT VEHICLES OTHER THAN THOSE ASSIGNED TO LIQUID OXYGEN (LOX) FUNCTIONS	39
INSPECT GROUNDING OR BONDING CABLES	35
PERFORM OPERATOR MAINTENANCE ON TANK TRUCKS OTHER THAN LOX FUNCTIONS' VEHICLES	32
ISSUE JPX	31

**REPRESENTATIVE TASKS PERFORMED BY PREVENTIVE MAINTENANCE AND DISTRIBUTION NCOs
(GRP172, N=89)**

TASKS	PERCENT MEMBERS PERFORMING
MAKE ENTRIES ON OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (FUEL SERVICING) FORMS (AFTO FORM 371)	97
GROUND REFUELING EQUIPMENT	97
CHECK REFUELING EQUIPMENT	94
DRIVE SEDANS OR PICKUP TRUCKS	94
MAKE ENTRIES ON OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) FORMS (AFTO FORM 374)	90
MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	88
BOND REFUELING EQUIPMENT	84
DRIVE TANK TRUCKS	80
FILL MOBILE REFUELING UNITS FROM BULK STORAGE	80
MAKE ENTRIES ON FILTER SEPARATOR PRESSURE DIFFERENTIAL LOG FORMS (AFTO FORM 422) DURING ISSUE	79
OPERATE R-9 TANK TRUCKS	78
OPERATE R-5 TANK TRUCKS	74
POSITION SAFETY EQUIPMENT, SUCH AS FIRE EXTINGUISHERS	74
COORDINATE VEHICLE MAINTENANCE WITH VEHICLE MAINTENANCE SECTION	73
MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD) FORMS (AF FORM 1995)	72
PERFORM 'RETURN TO BULK' OPERATIONS	69
DEFUEL AIRCRAFT	67
OPERATE R-8 TANK TRUCKS	64
ISSUE GROUND PRODUCTS USING MOBILE REFUELING UNITS	64
REVIEW OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (FUELS SERVICING) FORMS (AFTO FORM 371)	61
MAINTAIN STATUS BOARDS, CHARTS, OR GRAPHS	60
PERFORM SPARK CHECKS ON MOBILE REFUELING EQUIPMENT	60
DIRECT MAINTENANCE ACTIVITIES	58
REVIEW OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) FORMS (AFTO FORM 374)	57
FILL MOBILE REFUELING UNITS FROM HYDRANT SYSTEM	57
DETERMINE WORK PRIORITIES	56
DRIVE SMALL TRUCKS (UNDER 5 TONS)	54
INSPECT REPORTED DISCREPANCIES	53
SUPERVISE APPRENTICE FUEL SPECIALIST (AFSC 63130) PERSONNEL	53
DIRECT UTILIZATION OF EQUIPMENT	51

REPRESENTATIVE TASKS PERFORMED BY DISTRIBUTION AND STORAGE SYSTEMS OPERATORS
(GRP243, N=129)

TASKS	PERCENT MEMBERS PERFORMING
GROUND REFUELING EQUIPMENT	96
DRIVE SEDANS OR PICKUP TRUCKS	95
MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	94
EMPTY DRIP PANS	94
BOND REFUELING EQUIPMENT	93
POSITION DRIP PANS	92
FILL MOBILE REFUELING UNITS FROM BULK STORAGE	91
MAKE ENTRIES ON FILTER SEPARATOR PRESSURE DIFFERENTIAL LOG FORMS (AFTO FORM 422) DURING ISSUE	91
CHECK REFUELING EQUIPMENT	90
INSPECT GROUNDING OR BONDING CABLES	89
MAKE ENTRIES ON FILTER SEPARATOR PRESSURE DIFFERENTIAL LOG FORMS (AFTO FORM 422) DURING RECEIPT	88
MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD) FORMS (AF FORM 1995)	88
GAUGE TANKS FOR FUEL QUANTITY AND TEMPERATURE	87
DEFUEL AIRCRAFT	87
BOND MOBILE REFUELING UNITS TO FILL STANDS	86
MAKE ENTRIES ON FUEL SYSTEM DISCREPANCY AND INSPECTION RECORD FORMS (AFTO FORM 39) FOR STORAGE OPERATIONS	85
INSPECT ISSUING OR RECEIVING HOSES	84
MONITOR HOSES, VALVES, OR PUMPS DURING RECEIVING OPERATIONS	84
MAKE ENTRIES ON BULK STORAGE SUMMARY FORMS (AF FORM 1233)	83
MAKE ENTRIES ON OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (FUEL SERVICING) FORMS (AFTO FORM 371)	81
OPERATE R-5 TANK TRUCKS	81
ISSUE GROUND PRODUCTS USING MOBILE REFUELING UNITS	81
DRIVE SMALL TRUCKS (UNDER 5 TONS)	80
DRAIN WATER FROM STORAGE TANKS	78
SET OR REMOVE CHOCKS ON TANK TRUCKS OR TRAILERS	78
OPERATE R-9 TANK TRUCKS	77
DRIVE TANK TRUCKS	76
ISSUE GROUND PRODUCTS FROM BASE SERVICE STATIONS	76
POSITION SAFETY EQUIPMENT, SUCH AS FIRE EXTINGUISHERS	76
MAKE ENTRIES ON RECORD OF RECEIPTS FORMS (AF FORM 1231)	75

REPRESENTATIVE TASKS PERFORMED BY TECHNICAL SCHOOL INSTRUCTORS
(GRP531, N=10)

TASKS	PERCENT MEMBERS PERFORMING
ADMINISTER TESTS	100
SCORE TESTS	100
DRIVE SEDANS OR PICKUP TRUCKS	100
DRIVE TANK TRUCKS	100
OPERATE R-5 TANK TRUCKS	100
OPERATE R-9 TANK TRUCKS	100
GROUND REFUELING EQUIPMENT	100
CHECK REFUELING EQUIPMENT	100
MAKE ENTRIES ON OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (FUEL SERVICING) FORMS (AFTO FORM 371)	100
OPERATE R-8 TANK TRUCKS	100
BOND REFUELING EQUIPMENT	100
MAKE ENTRIES ON FUEL SYSTEM DISCREPANCY AND INSPECTION RECORD FORMS (AFTO FORM 39) FOR STORAGE OPERATIONS	100
INSPECT GROUNDING OR BONDING CABLES	100
INSPECT ISSUING OR RECEIVING HOSES	100
FILL MOBILE REFUELING UNITS FROM BULK STORAGE	100
MAKE ENTRIES ON FILTER SEPARATOR PRESSURE DIFFERENTIAL LOG FORMS (AFTO FORM 422) DURING ISSUE	100
CONDUCT RESIDENT COURSE CLASSROOM TRAINING	90
COUNSEL TRAINEES ON TRAINING PROGRESS	90
DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	90
OPERATE PRITCHARD HS	90
OPERATE MH2 HOSE CARTS	90
BOND MOBILE REFUELING UNITS TO FILL STANDS	90
DRAW SAMPLES USING WEIGHTED BOTTLE SAMPLERS	90
GUAGE TANKS FOR FUEL QUANTITY AND TEMPERATURE	90
COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	80
MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	80
MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD) FORMS (AF FORM 1995)	80
PERFORM OPERATOR MAINTENANCE ON HOSE CARTS	80
REVIEW OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (FUELS SERVICING) FORMS (AFTO FORM 371)	80

REPRESENTATIVE TASKS PERFORMED BY FUEL STORAGE OPERATORS
(GRP200, N=213)

TASKS	PERCENT MEMBERS PERFORMING
POSITION DRIP PANS	97
EMPTY DRIP PANS	93
GAUGE TANKS FOR FUEL QUANTITY AND TEMPERATURE	92
INSPECT GROUNDING OR BONDING CABLES	92
INSPECT ISSUING OR RECEIVING HOSES	90
MAKE ENTRIES ON BULK STORAGE SUMMARY FORMS (AF FORM 1233)	89
MAKE ENTRIES ON FUEL SYSTEM DISCREPANCY AND INSPECTION RECORD FORMS (AFTO 39) FOR STORAGE OPERATIONS	89
DRAIN WATER FROM STORAGE TANKS	88
MONITOR HOSES, VALVES, OR PUMPS DURING RECEIVING OPERATIONS	87
BOND MOBILE REFUELING UNITS TO FILL STANDS	85
MAKE ENTRIES ON RECORD OF RECEIPTS FORMS (AF FORM 1231)	84
GAUGE SHIPMENTS FOR WATER	78
PERFORM 'RETURN TO BULK' OPERATIONS	78
INSPECT SHIPMENTS FOR TYPE FUEL, SEDIMENT, OR WATER	77
PERFORM OPERATOR MAINTENANCE ON BULK STORAGE SYSTEMS	77
MAKE ENTRIES ON FILTER SEPARATOR PRESSURE DIFFERENTIAL LOG FORMS (AFTO FORM 422) DURING RECEIPT	76
ISSUE AUTOMOTIVE OIL FROM BASE SERVICE STATIONS	76
VERIFY CARRIER NUMBERS, DESTINATION, OR DOME SEAL NUMBERS AND CONDITION	76
SET WARNING SIGNS DURING RECEIPT OF BULK FUELS	76
ISSUE GROUND PRODUCTS FROM BASE SERVICE STATIONS	75
GROUND RAILWAY TANK CARS, TRUCKS, OR TRAILERS	73
MAKE ENTRIES ON PHYSICAL INVENTORY (FUELS/MISSILE PROPELLANTS) FORMS (AF FORM 1235)	73
SET OR REMOVE CHOCKS ON TANK TRUCKS OR TRAILERS	72
CLEAN RECEIVING STRAINERS	72
ACCEPT AND STORE JET PROPELLANT (UNSPECIFIED) (JPX)	69
INSPECT LOADED BULK FUEL COMPARTMENTS OR CONTAINERS OF DELIVERING CARRIERS	66
INSPECT FUEL TANKS FOR ULLAGE	65
CONNECT OR DISCONNECT OFFLOADING HOSES FROM RAILWAY TANK CARS, TRUCKS, OR TRAILERS	65
POSITION SAFETY EQUIPMENT, SUCH AS FIRE EXTINGUISHERS	65
TRANSFER FUEL FROM BULK STORAGE TO HYDRANT SYSTEMS	64

REPRESENTATIVE TASKS PERFORMED BY FUEL STORAGE SUPERVISORS
(GRP112, N=81)

TASKS	PERCENT MEMBERS PERFORMING
MAKE ENTRIES ON FUEL SYSTEM DISCREPANCY AND INSPECTION RECORD FORMS (AFTO FORM 39) FOR STORAGE OPERATIONS	96
INSPECT ISSUING OR RECEIVING HOSES	94
INSPECT GROUNDING OR BONDING CABLES	94
PREPARE APRS	90
MAKE ENTRIES ON BULK STORAGE SUMMARY FORMS (AF FORM 1233)	89
PLAN WORK ASSIGNMENTS	86
MAKE ENTRIES ON RECORD OF RECEIPTS FORMS (AF FORM 1231)	86
SUPERVISE FUEL SPECIALIST (AFSC 63150) PERSONNEL	85
DETERMINE WORK PRIORITIES	85
COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	85
DRAIN WATER FROM STORAGE TANKS	85
COORDINATE MAINTENANCE OF FACILITIES WITH CIVIL ENGINEERS	84
MONITOR HOSES, VALVES, OR PUMPS DURING RECEIVING OPERATIONS	84
POSITION DRIP PANS	84
MAKE ENTRIES ON PHYSICAL INVENTORY (FUELS/MISSILE PROPELLANTS) FORMS (AF FORM 1235)	83
PERFORM OPERATOR MAINTENANCE ON BULK STORAGE SYSTEMS	81
EMPTY DRIP PANS	81
GAUGE TANKS FOR FUEL QUANTITY AND TEMPERATURE	80
VERIFY CARRIER NUMBERS, DESTINATION, OR DOME SEAL NUMBERS AND CONDITION	80
INSPECT SHIPMENTS FOR TYPE FUEL, SEDIMENT, OR WATER	80
BOND MOBILE REFUELING UNITS TO FILL STANDS	78
INSPECT FUEL TANKS FOR ULLAGE	77
MAKE ENTRIES ON FILTER SEPARATOR PRESSURE DIFFERENTIAL LOG FORMS (AFTO FORM 422) DURING RECEIPT	75
INSPECT LOADED BULK FUEL COMPARTMENTS OR CONTAINERS OF DELIVERING CARRIERS	74
INSPECT UNLOADED BULK FUEL COMPARTMENTS OR CONTAINERS	73
INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	72
SCHEDULE LEAVES OR PASSES	72
INSPECT FUEL METERS	72
ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	70
SUPERVISE APPRENTICE FUEL SPECIALIST (AFSC 63130) PERSONNEL	70

REPRESENTATIVE TASKS PERFORMED BY SERVICE STATION OPERATORS
(GRP137, N=19)

TASKS	PERCENT MEMBERS PERFORMING
ISSUE AUTOMOTIVE OIL FROM BASE SERVICE STATIONS	100
ISSUE GROUND PRODUCTS FROM BASE SERVICE STATIONS	95
GAUGE TANKS FOR FUEL QUANTITY AND TEMPERATURE	89
MAKE ENTRIES ON FUEL SYSTEM DISCREPANCY AND INSPECTION RECORD FORMS (AFTO FORM 39) FOR STORAGE OPERATIONS	79
SET WARNING SIGNS DURING RECEIPT OF BULK FUELS	74
MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	68
REVIEW FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	58
PERFORM 'RETURN TO BULK' OPERATIONS	58
POSITION DRIP PANS	58
POSITION SAFETY EQUIPMENT, SUCH AS FIRE EXTINGUISHERS	58
INSPECT GROUNDING OR BONDING CABLES	58
OPERATE AUTOMATED SERVICE STATION	47
MAKE ENTRIES ON BULK FUEL ISSUE/DEFUEL SUMMARY FORMS (AF FORM 1232)	47
REVIEW FUELS SYSTEM DISCREPANCY AND INSPECTION RECORD FORMS (AFTO FORM 39)	47
INSPECT ISSUING OR RECEIVING HOSES	47
DRAIN WATER FROM STORAGE TANKS	47
MAKE ENTRIES ON BULK STORAGE SUMMARY FORMS (AF FORM 1233)	42
MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD) FORMS (AF FORM 1995)	42
EMPTY DRIP PANS	42
REVIEW PHYSICAL INVENTORY (FUELS/MISSILE PROPELLANTS) FORMS (AF FORM 1235)	42
MAKE ENTRIES ON PHYSICAL INVENTORY (FUELS/MISSILE PROPELLANTS) FORMS (AF FORM 1235)	37
REVIEW FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD) FORMS (AF FORM 1995)	37
SET OR REMOVE CHOCKS ON TANK TRUCKS OR TRAILERS	37
FILL MOBILE REFUELING UNITS FROM BULK STORAGE	37
REVIEW BULK FUELS ISSUE/DEFUEL SUMMARY FORMS (AF FORM 1232)	37
MONITOR HOSES, VALVES, OR PUMPS DURING RECEIVING OPERATIONS	32
MAKE ENTRIES ON RECORD OF RECEIPTS FORMS (AF FORM 1231)	32
INSPECT SHIPMENTS FOR TYPE FUEL, SEDIMENT, OR WATER	32
FILL MOBILE REFUELING UNITS FROM HYDRANT SYSTEM	32
PERFORM OPERATOR MAINTENANCE ON BULK STORAGE SYSTEMS	26

REPRESENTATIVE TASKS PERFORMED BY LIQUID OXYGEN (LOX) STORAGE PERSONNEL
(GRP086, N=14)

TASKS	PERCENT MEMBERS PERFORMING
TRANSFER LOX TO OXYGEN CARTS	100
MAINTAIN LOX STORAGE AREAS	100
INVENTORY LOX PRODUCTS	100
ACCEPT LIQUID OXYGEN (LOX) FROM COMMERCIAL OR MILITARY SOURCES	100
PERFORM OPERATOR MAINTENANCE ON LOX TANKS	100
SAMPLE LOX CARTS	93
MAINTAIN LOX HOSES	93
COORDINATE LIQUID OXYGEN (LOX) EQUIPMENT MAINTENANCE WITH ENVIRONMENTAL SYSTEMS FUNCTIONS	93
PERFORM PERIODIC QUALITY CONTROL INSPECTIONS OF LOX PRODUCTS	93
MAKE ENTRIES ON SYSTEM/EQUIPMENT STATUS RECORD FORMS (AFTO FORM 244)	86
PERFORM QUALITY CONTROL ACCEPTANCE INSPECTIONS OF LOX	86
INSPECT VEHICLES ASSIGNED TO LOX FUNCTIONS	64
PERFORM LOX QUALITY CONTROL ACCEPTANCE INSPECTIONS	64
PERFORM ODOR, PARTICULATE, OR PURITY TESTS ON LOX	57
INSPECT ISSUING OR RECEIVING HOSES	57
MAKE ENTRIES ON PHYSICAL INVENTORY (FUELS/MISSILE PROPELLANTS) FORMS (AFTO FORM 1235)	50
PERFORM OPERATOR MAINTENANCE ON VEHICLES ASSIGNED TO LOX FUNCTIONS	50
PERFORM PERIODIC LOX QUALITY CONTROL INSPECTIONS	50
COORDINATE CALIBRATION OF EQUIPMENT OF GAUGES WITH PRECISION MEASUREMENT EQUIPMENT LABORATORY (PMEL)	50
SET WARNING SIGNS DURING RECEIPT OF BULK FUELS	50
COORDINATE INSPECTIONS WITH FIRE DEPARTMENT	50
COORDINATE MAINTENANCE OF FACILITIES WITH CIVIL ENGINEERS	50
POSITION SAFETY EQUIPMENT, SUCH AS FIRE EXTINGUISHERS	50
REVIEW SYSTEM/EQUIPMENT STATUS RECORD FORMS (AFTO FORM 244)	43
POSITION DRIP PANS	43
INSPECT GROUNDING OR BONDING CABLES	43
DETERMINE WORK PRIORITIES	43
MONITOR HOSES, VALVES, OR PUMPS DURING RECEIVING OPERATIONS	43
CONNECT OR DISCONNECT OFFLOADING HOSES FROM RAILWAY TANK CARS, TRUCKS, OR TRAILERS	43
VERIFY CARRIER NUMBERS, DESTINATION, OR DOME SEAL NUMBERS AND CONDITION	43

REPRESENTATIVE TASK PERFORMED BY FUEL DISTRIBUTION
AND FUEL CONTROL SUPERVISORS
(GRP095, N=177)

TASKS	PERCENT MEMBERS PERFORMING
SUPERVISE FUEL SPECIALIST (AFSC 63150) PERSONNEL	89
DRIVE SEDANS OR PICKUP TRUCKS	84
PREPARE APRS	83
COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	83
DIRECT MOBILE FUELING OPERATIONS	79
DISPATCH FUEL REQUESTS	75
DETERMINE WORK PRIORITIES	73
MAKE ENTRIES ON DAILY FUELS REQUEST AND SERVICING LOG FORMS (AF FORM 824)	72
REVIEW FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	69
MAKE ENTRIES ON OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (FUEL SERVICING) FORMS (AFTO FORM 371)	68
DIRECT UTILIZATION OF EQUIPMENT	67
INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	67
REVIEW FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD) FORMS (AF FORM 1995)	66
PLAN WORK ASSIGNMENTS	66
MAKE ENTRIES ON OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) FORMS (AFTO FORM 374)	66
SUPERVISE APPRENTICE FUEL SPECIALIST (AFSC 63130) PERSONNEL	64
MAINTAIN STATUS BOARDS, CHARTS, OR GRAPHS	64
POSITION SAFETY EQUIPMENT, SUCH AS FIRE EXTINGUISHERS	63
MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	63
CHECK REFUELING EQUIPMENT	62
PERFORM 'RETURN TO BULK' OPERATIONS	61
SCHEDULE LEAVES OR PASSES	60
REVIEW OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (FUELS SERVICING) FORMS (AFTO FORM 371)	59
GROUND REFUELING EQUIPMENT	59
FILL MOBILE REFUELING UNITS FROM HYDRANT SYSTEM	59
DIRECT HYDRANT REFUELING FLIGHTLINE OPERATIONS	58
MAKE ENTRIES ON FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD) FORMS (AF FORM 1995)	58
FILL MOBILE REFUELING UNITS FROM BULK STORAGE	56
OPERATE R-9 TANK TRUCKS	56
MAKE ENTRIES ON FILTER SEPARATOR PRESSURE DIFFERENTIAL LOG FORMS (AFTO FORM 422) DURING ISSUE	56

REPRESENTATIVE TASKS PERFORMED BY FUEL OPERATIONS SUPERVISORS
(GRP091, N=195)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	94
PREPARE APRS	93
DETERMINE WORK PRIORITIES	90
EVALUATE INSPECTION REPORTS OR PROCEDURES	86
ENDORSE AIRMEN PERFORMANCE REPORTS (APR)	86
INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	84
ASSIGN PERSONNEL TO DUTY POSITIONS	84
INVESTIGATE MISHAPS OR INCIDENTS	83
ANALYZE WORKLOAD REQUIREMENTS	83
SCHEDULE LEAVES OR PASSES	83
WRITE CORRESPONDENCE	82
INSPECT REPORTED DISCREPANCIES	82
EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	80
PLAN WORK ASSIGNMENTS	80
ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDARD OPERATING PROCEDURES (SOP)	80
DEVELOP WORK METHODS OR PROCEDURES	79
ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	79
PLAN BRIEFINGS	78
EVALUATE WORK SCHEDULES	74
SUPERVISE FUEL SUPERVISOR (AFSC 63170) PERSONNEL	72
IMPLEMENT SAFETY PROGRAMS	70
DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	70
EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	70
EVALUATE SAFETY PROGRAMS	69
PLAN SAFETY PROGRAMS	67
DIRECT UTILIZATION OF EQUIPMENT	66
EVALUATE MAINTENANCE OR USE OF WORKSPACE, EQUIPMENT, OR SUPPLIES	66
SELECT INDIVIDUALS FOR SPECIALIZED TRAINING	66
SUPERVISE FUEL SPECIALIST (AFSC 63150) PERSONNEL	65
COORDINATE VEHICLE MAINTENANCE WITH VEHICLE MAINTENANCE SECTION	65

REPRESENTATIVE TASKS PERFORMED BY QUALITY CONTROL TECHNICIANS-SUPERVISORS
(GRP125, N=11)

TASKS	PERCENT MEMBERS PERFORMING
DIRECT QUALITY CONTROL PROGRAMS	100
PREPARE APRS	100
EVALUATE QUALITY CONTROL PROCEDURES	91
CONDUCT EXTERNAL INSPECTION OF ORGANIZATIONAL FUEL TANKS	82
ENDORSE AIRMEN PERFORMANCE REPORTS (APR)	82
EVALUATE INSPECTION REPORTS OR PROCEDURES	73
EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	73
WRITE CORRESPONDENCE	73
SCHEDULE LEAVES OR PASSES	73
INSPECT REPORTED DISCREPANCIES	64
EVALUATE SAFETY PROGRAMS	64
INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	64
ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	64
COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	64
DETERMINE WORK PRIORITIES	64
EVALUATE ADMINISTRATIVE FORMS, FILES, OR PROCEDURES	55
SUPERVISE FUEL SPECIALIST (AFSC 63150) PERSONNEL	55
REVIEW FUEL AND EQUIPMENT SAMPLING FREQUENCIES	55
DEVELOP WORK METHODS OR PROCEDURES	55
PLAN SAFETY PROGRAMS	45
IMPLEMENT SAFETY PROGRAMS	45
REVIEW OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (FUELS SERVICING) FORMS (AFTO FORM 371)	45
REVIEW OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (GENERAL PURPOSE VEHICLES) FORMS (AFTO FORM 374)	45
EVALUATE SUGGESTIONS	45
REVIEW TEST EQUIPMENT CALIBRATION FREQUENCIES	45
PLAN WORK ASSIGNMENTS	45
PERFORM AMERICAN PETROLEUM INSTITUTE (API) GRAVITY TESTS ON JET PROPELLANT-4 (JP-4) OR AVIATION GASOLINE (AVGAS)	45
COORDINATE CALIBRATION OF EQUIPMENT OR GAUGES WITH PRECISION MEASUREMENT EQUIPMENT LABORATORY (PMEL)	45
COUNSEL TRAINEES ON TRAINING PROGRESS	36
INVESTIGATE MISHAPS OR INCIDENTS	36

REPRESENTATIVE TASKS PERFORMED BY FUEL CONTROLLERS
(GRP042, N=44)

TASKS	PERCENT MEMBERS PERFORMING
MAKE ENTRIES ON DAILY FUELS REQUEST AND SERVICING LOG FORMS (AF FORM 824)	89
MAINTAIN STATUS BOARDS, CHARTS, OR GRAPHS	89
DISPATCH FUEL REQUESTS	77
REVIEW DAILY FUELS REQUEST AND SERVICING LOG FORMS (AF FORM 824)	68
DIRECT MOBILE FUELING OPERATIONS	66
REVIEW FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	59
DIRECT UTILIZATION OF EQUIPMENT	59
REVIEW FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD) FORM (AF FORM 1995)	55
DETERMINE WORK PRIORITIES	52
MAKE JET FUEL IDENTAPLATE FORMS (DD FORM 1896)	52
REVIEW FILTER SEPARATOR PRESSURE DIFFERENTIAL LOG FORMS (AFTO FORM 422)	45
DRIVE SEDANS OR PICKUP TRUCKS	43
COORDINATE FLIGHT SCHEDULES WITH MAINTENANCE JOE CONTROL	43
FILL MOBILE REFUELING UNITS FROM HYDRANT SYSTEM	43
REVIEW OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT (FUELS SERVICING) FORMS (AFTO FORM 371)	41
ANALYZE WORKLOAD REQUIREMENTS	39
COORDINATE VEHICLE MAINTENANCE WITH VEHICLE MAINTENANCE SECTION	39
MAKE AVIATION GASOLINE IDENTAPLATE FORMS, SUCH AS AF FORM 1245 OR DD FORM 1897	36
POSITION SAFETY EQUIPMENT, SUCH AS FIRE EXTINGUISHERS	36
REVIEW BULK FUELS ISSUE/DEFUEL SUMMARY FORMS (AF FORM 1232)	34
PERFORM 'RETURN TO BULK' OPERATIONS	32
DIRECT DEVELOPMENT OR MAINTENANCE OF STATUS BOARDS, GRAPHS, OR CHARTS	25
SUPERVISE FUEL SPECIALIST (AFSC 63150) PERSONNEL	25
DIRECT HYDRANT REFUELING FLIGHTLINE OPERATIONS	23
REVIEW OPERATOR'S INSPECTION GUIDE AND TROUBLE (GENERAL PURPOSE VEHICLES) FORMS (AFTO FORM 374)	23
COORDINATE MAINTENANCE OF FACILITIES WITH CIVIL ENGINEERS	23
MAKE USAF VEHICLE SERVO O PLATE FORMS (AF FORM 1252)	20
MAKE USAF GROUND FUEL IDENTAPLATE FORMS (AF FORM 1295)	20
COORDINATE DECONTAMINATION OF EQUIPMENT OR AREAS AFFECTED BY FUEL SPILLS WITH FIRE DEPARTMENT	18
OPERATE GRU-16E PANTOGRAPH	18

REPRESENTATIVE TASKS PERFORMED BY FUEL TRAINING NCOs
(GRP033, N=47)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
PREPARE TRAINING RECORDS, CHARTS, OR GRAPHS	91
DEVELOP LESSON PLANS	89
COUNSEL TRAINEES ON TRAINING PROGRESS	85
ADMINISTER TESTS	83
CONDUCT OJT	79
CONDUCT TRAINING CONFERENCES OR BRIEFINGS	79
SCORE TESTS	79
SCHEDULE PERSONNEL FOR SCHOOLS, TEMPORARY DUTY (TDY) ASSIGNMENTS, OR NONTECHNICAL TRAINING	79
MAINTAIN TRAINING EQUIPMENT	79
DETERMINE OJT TRAINING REQUIREMENTS	77
DIRECT OR IMPLEMENT TRAINING PROGRAMS OTHER THAN OJT	74
PREPARE TRAINING SCHEDULES	74
WRITE TRAINING REPORTS	74
DEVELOP TRAINING AIDS	74
ACT AS UNIT OR STAFF LEVEL TRAINING ADVISOR	70
WRITE TEST QUESTIONS	70
MAINTAIN STUDY REFERENCE FILES	70
VERIFY ENROLLMENT IN CDCs	70
DIRECT OR IMPLEMENT OJT PROGRAMS	68
EVALUATE OJT TRAINEES	66
PRODUCE TRAINING AIDS, SPACE, OR EQUIPMENT	66
DEVELOP CHECKLISTS FOR USE DURING TRAINING SESSIONS	66
COORDINATE SUPPLY MATTERS WITH BASE SUPPLY	64
DEVELOP JOB PROFICIENCY GUIDES (JPG)	64
INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	60
PLAN OJT	60
MAINTAIN STATUS BOARDS, CHARTS, OR GRAPHS	60
EVALUATE TRAINING METHODS, TECHNIQUES, OR PROGRAMS	57
PLAN SECURITY PROGRAMS	57
PLAN BRIEFINGS	57

REPRESENTATIVE TASKS PERFORMED BY QUALITY CONTROL LABORATORY PERSONNEL
(GRP062, N=120)

TASKS	PERCENT MEMBERS PERFORMING
MAKE ENTRIES ON BASE FUELS SAMPLING AND TESTING RECORD FORMS (AFTO FORM 150)	99
DRAW SAMPLES USING IN-LINE SAMPLERS	97
CLEAN LABORATORY TESTING EQUIPMENT	97
PERFORM TOTAL SOLID SEDIMENT TESTS OF FUEL USING BOTTLE METHOD	97
PERFORM TOTAL SOLID SEDIMENT TESTS OF FUEL USING IN-LINE METHODS	96
PERFORM TIME FILTRATIONS	96
PERFORM AERONAUTICAL ENGINEER LABORATORY (AEL) WATER TESTS	95
PERFORM FUEL SYSTEM ICE INHIBITOR (FSII) FREEZE POINT TESTS	94
PERFORM VISUAL CHECKS FOR SULPHIDES IN WATER	94
STORE LABORATORY EQUIPMENT	93
PERFORM COLORIMETRIC TESTS	92
PREPARE PETROLEUM SAMPLES FOR SHIPMENT TO AEROSPACE LABORATORIES	92
DRAW SAMPLES USING BACON BOMB SAMPLERS	92
PERFORM FIBER TESTS ON PETROLEUM PRODUCTS	92
REPLACE AEL STANDARDS CARDS ON WATER DETECTORS	90
REVIEW FUEL AND EQUIPMENT SAMPLING FREQUENCIES	89
PERFORM CORRELATION SAMPLE TESTS ON FUELS	89
DRAW SAMPLES USING WEIGHTED BOTTLE SAMPLERS	89
MAKE ENTRIES ON FUELS AND LUBRICANTS SAMPLE FORMS (AFTO FORM 475)	89
MAINTAIN CRASH KITS	89
CALIBRATE THEROMETERS	87
PERFORM SPECIFIC GRAVITY TEST ON PETROLEUM PRODUCTS	86
COMPARE AIRCRAFT SUMP SAMPLES WITH PARTICLE ASSESSMENT GUIDE	85
PERFORM VISUAL CHECKS OF LIQUIDS OTHER THAN WATER	84
REVIEW TEST EQUIPMENT CALIBRATION FREQUENCIES	84
PERFORM MICROSCOPIC TESTS OF MILLIPORE FILTERS	79
IDENTIFY RECLAIMABLE FUELS	78
CONVERT AMERICAN MEASUREMENTS TO METRIC MEASUREMENTS	76
DRAW SAMPLES USING COSMODYNE SAMPLERS	74
DRAW SAMPLES USING DRUM THIEVES	73

REPRESENTATIVE TASKS PERFORMED BY FUEL ACCOUNTING PERSONNEL
(GRP021, N=167)

TASKS	PERCENT MEMBERS PERFORMING
REVEIW FUELS ISSUE/DEFUEL DOCUMENT (DOD) FORMS (AF FORM 1994)	97
REVIEW PHYSICAL INVENTORY (FULES/MISSILE PROPELLANTS) FORMS (AF FORM 1235)	90
REVIEW BULK STORAGE SUMMARY FORMS (AF FORM 1233)	89
REVIEW FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD) FORMS (AF FORM 1995)	87
MAKE ENTRIES ON GENERAL PURPOSE CREATION FORMS (AF FORM 1991)	87
REVIEW INVENTORY (FUELS/MISSILE PROPELLANTS) FORMS (AF FORM 1237)	87
REVIEW BULK FUELS ISSUE/DEFUEL SUMMARY FORMS (AF FORM 1232)	85
INPUT DATA FROM GENERAL PURPOSE CREATION FORMS (AF FORM 1991) TO COMPUTER	84
REVIEW RECORD OF RECEIPTS FORMS (AF FORM 1231)	82
CROSS-CHECK DATA FROM MANUAL RECORDS WITH DAILY TRANSACTION REGISTER (D06/800-41)	81
MAKE ENTRIES ON INVENTORY (FUELS/MISSILE PROPELLANTS) FORMS (AF FORM 1237)	80
CROSS-CHECK DATA FROM MANUAL RECORDS WITH DAILY FUELS MANAGEMENT DATA REPORT (05/856-77)	79
CROSS-CHECK DATA FROM MANUAL RECORDS WITH DAILY DOCUMENT REGISTER (D04/804-50)	78
PROOF PUNCHED CARDS	78
COORDINATE FUEL ACCOUNTING MATTERS WITH ACCOUNTING AND FINANCE	78
MAINTAIN DOCUMENT CONTROL FILES	75
CROSS-CHECK DATA FROM MANUAL RECORDS WITH (MONTHLY) FUELS INVENTORY ADJUSTMENT DOCUMENT REGISTER (M22/842-72)	71
MAKE ENTRIES ON BUL FUEL ISSUE/DEFUEL SUMMARY FORMS (AF FORM 1232)	70
MAKE ENTRIES ON DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT FORMS (DD FORM 1348-1)	68
OPERATE COMPUTER REMOTE	66
CROSS-CHECK DATA FROM MANUAL RECORDS WITH WEEKLY FUELS MANAGEMENT DATA REPORT (D05/856-77)	66
CROSS-CHECK DATA FROM MANUAL RECORDS WITH MONTHLY FUELS MANAGEMENT DATA REPORT (M34/856-77)	66
MAKE USAF GROUND FUEL IDENTAPLATE FORMS (AF FORM 1295)	56
CROSS-CHECK DATA FROM MANUAL RECORDS WITH (MONTHLY) FUELS DEIS-I REPORT (RCS: DP-M(AR)1313) (M02/879-40)	54
MAKE JET FUEL IDENTAPLATE FORMS (DD FORM 1896)	53
CROSS-CHECK DATA FROM MANUAL RECORDS WITH (DAILY) REJECT LISTING (D02/818)	51
CROSS-CHECK DATA FROM MANUAL RECORDS WITH FUELS SALES ANALYSIS REPORT (RCS: HAF-LEY(M)7405) (M27/996)	50
MAKE AVIATION GASOLINE IDENTAPLATE FORMS, SUCH AS FORMS 1245 OR DD FORM 1897	46
COORDINATE PREPOSITIONED WAR RESERVE MATERIEL STOCK (PWRMS) REPORT WITH OTHER SECTIONS OR HIGHER HEADQUARTERS	46
REVIEW DAILY FUELS REQUEST AND SERVICING LOG FORMS (AF FORM 824)	45