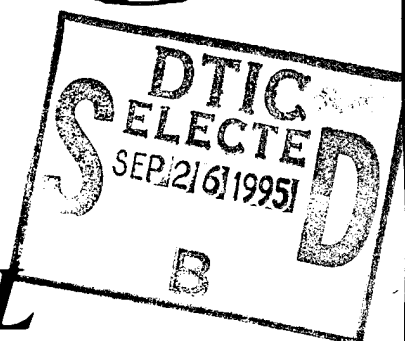
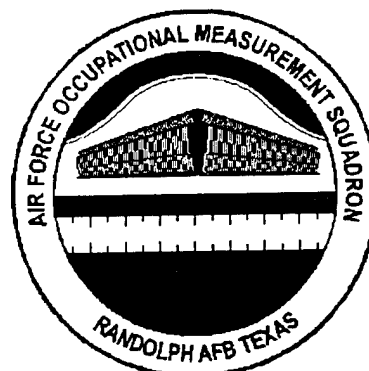




**UNITED STATES
AIR FORCE**



OCCUPATIONAL SURVEY REPORT

FUELS

AFSC 2F0X1

AFPT 90-631-020

AUGUST 1995

**OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION and TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150-4449**

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

19950922 039

DTIC QUALITY INSPECTED 1

DISTRIBUTION FOR AFSC 2F0X1 OSR

	<u>OSR</u>	<u>ANL</u> <u>EXT</u>	<u>TNG</u> <u>EXT</u>	<u>JOB</u> <u>INV</u>
AFOMS/OMDQ	1			
AFOMS/OMYXL	10		5	10
AL/HRMM	2			
ARMY OCCUPATIONAL SURVEY BRANCH	1			
CCAF/AYX	1			
DEFENSE TECHNICAL INFORMATION CENTER	2			
HQ ACC/DPTTF	3		3	
HQ AETC/DPAEE	3		3	
HQ AFMC/DPUE	3		3	
HQ AFMPC/DPMRAD1	1			
HQ AFMPC/DPPAPC	1			
HQ AFSOC/DPPMT	2		2	
HQ AMC/DPAET	1			
HQ PACAF/DPAET	3		3	
HQ USAF/LGSP, 1030 AIR FORCE, PENTAGON, RM 4A276, WASHINGTON DC 20330-1030	1		1	
HQ USAFE/DPATTJ	3		3	
HQ USMC/STANDARDS BRANCH	1			
NODAC	1			
366 TRS/TSIF, 727 MISSILE RD, BLDG 1927, SHEPPARD AFB TX 76311-2254	3	1	3	3
782 TRG/TTS, 826 G AVE, STE 4, SHEPPARD AFB TX 76311-2867	1		1	

Table of Contents

	<u>PAGE NUMBER</u>
PREFACE.....	iv
SUMMARY OF RESULTS.....	vi
INTRODUCTION.....	1
Background.....	1
SURVEY METHODOLOGY.....	2
Inventory Development.....	2
Survey Administration.....	2
Survey Sample.....	3
Task Factor Administration.....	3
CAREER LADDER STRUCTURE.....	7
Overview of Specialty Jobs.....	7
Group Descriptions.....	9
Comparison to Previous Study.....	23
Summary.....	23
ANALYSIS OF DAFSC GROUPS.....	25
Skill-Level Descriptions.....	25
Summary.....	31
ANALYSIS OF AFMAN 36-2108 SPECIALTY JOB DESCRIPTIONS.....	31
2F0X1 TRAINING ANALYSIS.....	36
First-Enlistment Personnel.....	36
Training Emphasis (TE) and Task Difficulty (TD) Data.....	39
Specialty Training Standard (STS) Analysis.....	39
Plan of Instruction (POI) Analysis.....	43
JOB SATISFACTION ANALYSIS.....	44
Summary.....	44
IMPLICATIONS.....	48
APPENDIX A REPRESENTATIVE TASKS PERFORMED BY MEMBERS OF CAREER LADDER JOBS.....	49
APPENDIX B LISTING OF MODULES AND TAKS STATEMENTS.....	63

THIS PAGE INTENTIONALLY LEFT BLANK

PREFACE

This report presents the results of an occupational survey of the Fuels career ladder, AFSC 2F0X1 (formerly 631X0). Authority for conducting occupational surveys is found in AFI 36-2623. Computer products used in this report are available for use by operations and training officials.

Captain Carol Owen, Canadian Air Forces, Occupational Analyst, developed the survey instrument, and Captain Charles T. McIntyre analyzed the data and wrote the final report. Mr Wayne Fruge provided programming support. This report has been reviewed and approved for release by Major Randall C. Agee, Chief, Airman Analysis Section, Occupational Analysis Flight, Air Force Occupational Measurement Squadron.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies may be requested from the USAF Occupational Measurement Squadron, Attention: Chief, Occupational Analysis Flight (OMY), 1550 5th Street East, Randolph AFB Texas 78150-4449.

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

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

Accession For	
AFIS GRAFI	☒
AFIS TAB	☐
Unannounced	☐
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

THIS PAGE INTENTIONALLY LEFT BLANK

SUMMARY OF RESULTS

1. Survey Coverage: This report is based on responses from 1,601 AFSC 2F0X1 respondents representing 35 percent of all eligible AFSC 2F0X1 personnel.
2. Specialty Jobs: This specialty is extremely stable, but very heterogeneous. Structure analysis identified six job clusters and five independent jobs: Mobile Distribution Operations Cluster, Preventive Maintenance Cluster, Hydrant Cluster, Storage Job, Cryogenics Production Job, Fuel Laboratory Job, Fuels Control Center Job, Management Cluster, Fuels Support Cluster, Fuels Accounting Cluster, and Tech School Instructor Job. The clusters and independent jobs are discussed within this report.
3. Career Ladder Progression: AFSC 2F0X1 personnel follow an orderly skill level progression. The 3-skill level personnel primarily perform basic technical tasks, while the 5-skill level personnel have a slightly broader job. The 7-skill level personnel begin to take on more supervisory duties, but still keep a hand in the technical duties of the career ladder. The 9-level and CEMs make up the senior leadership and management for the career ladder.
4. AFMAN 36-2108 Specialty Descriptions: The *AFMAN 36-2108 Specialty Descriptions* for the Fuels career ladder were reviewed. They provide an accurate description of the jobs performed at each skill level.
5. Training: An analysis of the current AFSC 2F0X1 STS and J3ABR63130 Plan of Instruction (POI) shows that both documents are extremely sound. All of the Specialty Training Standard (STS) items and POI learning objectives were supported; however, numerous technical tasks were not referenced to either document. This list should be reviewed by training personnel to ensure that both documents are complete.
6. Job Satisfaction: Overall, AFSC 2F0X1 respondents are satisfied with their jobs. When compared to other Direct Support specialties surveyed in 1993, AFSC 2F0X1 personnel show somewhat lower job satisfaction in the 1-48 months and 49-96 months TAFMS groups. When compared to the 1989 (AFSC 631X0) OSR, there has been no significant change in job satisfaction.
7. Implications: The Fuels (AFSC 2F0X1) career ladder has not changed much since the last survey in 1989. Career ladder progression is typical, and the *AFMAN 36-2108 Specialty Descriptions* are accurate. The technical training program is sound, and both the STS and POI are well supported by survey data. Job satisfaction data show the members of the career ladder are generally satisfied with their jobs. No major changes to the career ladder are expected.

THIS PAGE INTENTIONALLY LEFT BLANK

OCCUPATIONAL SURVEY REPORT (OSR)
FUELS
(AFSC 2F0X1)

INTRODUCTION

This is a report of an occupational survey of the Fuels career ladder (AFSC 2F0X1, formerly AFSC 631X0). This survey was conducted to collect current data for use in validating training documents. A new STS was developed and approved at the 16 November 1993 Utilization and Training Workshop, but it does not yet have a publication date. The Plan of Instruction (POI) for the entry-level course is dated 4 October 1993. The last occupational survey for this career ladder was published in July 1989.

Background

As described in the *AFMAN 36-2108 Specialty Descriptions*, DAFSC 2F031 and 2F051 airmen operate fuel handling equipment to receive, store, inspect, issue, transfer, test, and transport petroleum fuels, aircraft systems environmental fluid, demineralized water, and cryogenics. In addition, they perform operator maintenance on fuel handling equipment, and prepare receipt, inventory, and issue accounting documents for fuels and cryogenics. Seven-skill level members supervise and participate in all duties described for 3- and 5-skill level personnel, as well as, plan, supervise, operate, inspect, and maintain petroleum fuels and cryogenic facilities and equipment.

Initial 3-skill level training is provided through a 6-week, 2-day course at Sheppard AFB TX. The Fuels Apprentice course, J3ABR2F031-000, provides training and the skills and knowledge necessary to perform tasks related to the receipt, storage, issue, and quality control of petroleum and cryogenic products. Training is also included on Air Force publications, initiating base fuels management office accounting forms; automated data processing familiarization, and the inspection, operation, and operational maintenance of storage and dispensing equipment to include fuel servicing vehicles.

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

SURVEY METHODOLOGY

Inventory Development

Data for this survey were collected using USAF Job Inventory (JI), AFPT 90-2F0-020, dated November 1993. A preliminary task list was prepared after reviewing career ladder documents, tasks from the previous Fuels JI, and data from the previous OSR. This preliminary task list was then validated through interviews with 29 subject-matter experts at the following organizations:

<u>BASE</u>	<u>ORGANIZATIONS VISITED</u>
Chanute AFB IL	3330 TCHTW/TTOA (The location of the training program when inventory development began).
Davis-Monthan AFB AZ	355 SUPS/SUF
Dover AFB DE	436 SUP/LGSF
Barksdale AFB LA	2 SUPS/LGSF

The final JI contains 351 tasks grouped under 13 duty headings, with standard background questions asking respondents to indicate paygrade, duty title, time in service, time in present job, time in career ladder, and job satisfaction. Additional background questions concerning currency of SEIs held, currency on mobility equipment, and equipment and forms usage were also asked. Responses to these questions are of use to functional and training personnel.

Survey Administration

Eligible survey respondents were selected from Uniform Airmen Record data tapes supplied by the Air Force Military Personnel Center. Eligible members for the survey consisted of the total assigned population, excluding the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring during the time inventories were administered to the field; and (4) personnel in their jobs less than 6 weeks. From December 1993 to May 1994, Military Personnel Flights at operational bases worldwide administered the JI to Aircraft Fuel System Maintenance personnel.

Each individual who filled out an inventory first completed the identification and biographical information section. Next, respondents answered questions in the background portion of the inventory. They were then instructed to go through the booklet and check each task they perform in their current job. Finally, they were asked to go back and rate the relative

amount of time spent on each task performed using a 9-point scale. Time-spent ratings range from 1 (indicating a very small amount of time spent) to 9 (indicating a very large amount of time spent).

Comprehensive Occupational Data Analysis Programs (CODAP) calculated the relative percent time each respondent spent performing tasks by first totaling each respondent's ratings on all tasks marked, dividing the ratings for each task by this total, and multiplying by 100. Percent time spent ratings from all respondents were used, along with percent members performing (PMP) information, to create individual position descriptions. These job descriptions are then analyzed to describe various groups in the career ladder.

Survey Sample

Considering the large number of assigned incumbents (4,633), a stratified random sample was used to select participants for the survey. First, the population was screened to remove those usually considered not eligible to participate in an occupational survey and job inventories were mailed to half of the remaining eligible population. Results are based on responses from 1,601 respondents representing 81 percent of surveyed eligibles and 35 percent of the total population. Tables 1 and 2 compare the MAJCOM and paygrade distributions of all assigned personnel with the sample. Both tables show that the sample adequately represents the population.

Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor data were collected by asking selected E-6 and E-7 NCOs to complete either a training emphasis (TE) or task difficulty (TD) booklet. These booklets are processed separately from the JIs, and the TE and TD data are considered when analyzing other issues in the survey.

Training Emphasis (TE). TE is defined as the amount of structured training first-enlistment personnel need to perform tasks successfully. Structured training is defined as training provided by resident technical schools, field training detachments, mobile training teams, formal OJT, or any other organized training method. Fifty experienced AFSC 2F0X1 NCOs rated the tasks in the inventory on a 10-point scale ranging from 0 (no training required) to 9 (extremely high TE). Interrater agreement for these 50 raters was acceptable. The average TE rating is 3.09, with a standard deviation of 1.79. Any task with a TE rating of 4.88 or greater is considered to have a high TE.

Task Difficulty (TD). TD is defined as an estimate of the length of time the average airman takes to learn how to perform a task. Fifty-nine experienced NCOs rated the difficulty of tasks on a 9-point scale ranging from 1 (easy to learn) to 9 (very difficult to learn). Interrater agreement was again acceptable. TD ratings are normally adjusted so tasks have an average difficulty value

TABLE 1

MAJCOM REPRESENTATION OF SAMPLE
AFSC 2F0X1

COMMAND	PERCENT ASSIGNED* (N=4,633)	PERCENT OF SAMPLE (N=1,601)
ACC	41	42
AMC	16	18
PACAF	14	15
USAFE	16	12
AETC	7	8
AFMC	4	4
AFSOC	1	1

Total Assigned = 4,633

Total in Survey Sample = 1,601

Percent of Assigned in Sample = 35%

Percent of Surveyed in Sample = 81%

* Assigned strength as of November 1993

TABLE 2
PAYGRADE DISTRIBUTION OF SAMPLE
AFSC 2F0X1

<u>PAYGRADE</u>	<u>PERCENT ASSIGNED (N=4,633)</u>	<u>PERCENT IN SAMPLE (N=1,601)</u>
E-1 TO E-3	21	19
E-4	34	36
E-5	21	23
E-6	12	12
E-7	8	8
E-8	2	1
E-9	2	1

NOTE: Assigned strength as of November 1993

of 5.00, with a standard deviation of 1.00. Thus, any task with a TD rating of 6.00 or above is considered difficult to learn. TE and TD ratings, when used with percent members performing values, can provide insight into first-enlistment training requirements, help validate the need for structured training, and aid in the evaluation of the plan of instruction (POI) for a career ladder.

CAREER LADDER STRUCTURE

The first step in the analysis process is to identify the career ladder structure in terms of jobs performed by the respondents. CODAPs assist by creating a job description for each respondent based on the tasks performed and relative amount of time spent on these tasks. The CODAP automated clustering program compares all individual descriptions, locates the two job descriptions with the most similar tasks and percent time ratings, and combines them to form a composite job description. In successive stages, new members are added to the initial groups, or new groups are formed based on the similarity of tasks performed and time spent. This process continues until all possible respondents are included in a group.

The basic grouping in the hierarchical clustering process is the job. When there is a substantial degree of similarity between jobs, they are grouped together and identified as a cluster. The structure of the Fuels career ladder is defined in terms of the jobs and clusters that the 1,601 respondents perform.

Overview

Analysis of the data show AFSC 2F0X1 personnel perform work related to six clusters and five independent jobs. These include the mobile distribution operations cluster, preventive maintenance cluster, hydrant cluster, storage job, cryogenic production job, fuel laboratory job, fuels control center job, management cluster, fuels support cluster, fuels accounting cluster, and the tech school instructor job.

The job structure is displayed graphically in Figure 1 and in the outline presented below. The stage (STG) number listed beside each job title is a reference number assigned by CODAP, while the letter "N" refers to the number of respondents performing the job.

- I. MOBILE DISTRIBUTION OPERATIONS CLUSTER (STG60, N=378)
 - A. ENTRY LEVEL DISTRIBUTION JOB
 - B. MOBILE DISTRIBUTION JOB
 - C. MOBILE DISTRIBUTION SAFETY AND INSPECTIONS JOB
 - D. MOBILE DISTRIBUTION AND QUALITY CONTROL JOB
 - E. CRYOGENICS DISTRIBUTION JOB
- II. PREVENTIVE MAINTENANCE CLUSTER (STG83, N=47)
 - A. PREVENTIVE MAINTENANCE TECHNICIAN JOB
 - B. PREVENTIVE MAINTENANCE SUPERVISOR JOB
- III. HYDRANT CLUSTER (STG80, N=56)

- A. HYDRANT OPERATOR JOB
- B. HYDRANT SUPERVISOR JOB
- IV. STORAGE CLUSTER (STG148, N=224)
 - A. ENTRY-LEVEL FUELS STORAGE JOB
 - B. DISTRIBUTION AND STORAGE JOB
 - C. FUELS STORAGE SPECIALIST JOB
 - D. CRYOGENICS STORAGE JOB
- V. CRYOGENICS PRODUCTION JOB (STG159, N=26)
- VI. FUEL LABORATORY JOB (STG178, N=98)
- VII. FUELS CONTROL CENTER JOB (STG 151, N=207)
- VIII. MANAGEMENT CLUSTER (STG21, N=318)
 - A. FIRST-LINE SUPERVISOR JOB
 - B. SHOP CHIEF JOB
 - C. QUALITY CONTROL INSPECTION JOB
- IX. FUELS SUPPORT CLUSTER (STG153, N=49)
 - A. FUELS SUPPORT TECHNICIAN JOB
 - B. FUELS SUPPORT SUPERVISOR JOB
- X. FUELS ACCOUNTING CLUSTER (STG85, N=107)
 - A. FUELS ACCOUNTANT SUPERVISOR JOB
 - B. FUELS ACCOUNTANT JOB
- XI. TECH SCHOOL INSTRUCTOR JOB (STG152, N=7)

The respondents forming these groups account for 95 percent of the survey sample. The remaining 5 percent were performing tasks or series of tasks that did not group with any of the defined jobs. Examples of job titles these members had are Dorm Manager, Leap NCO, and Superintendent of Student Affairs.

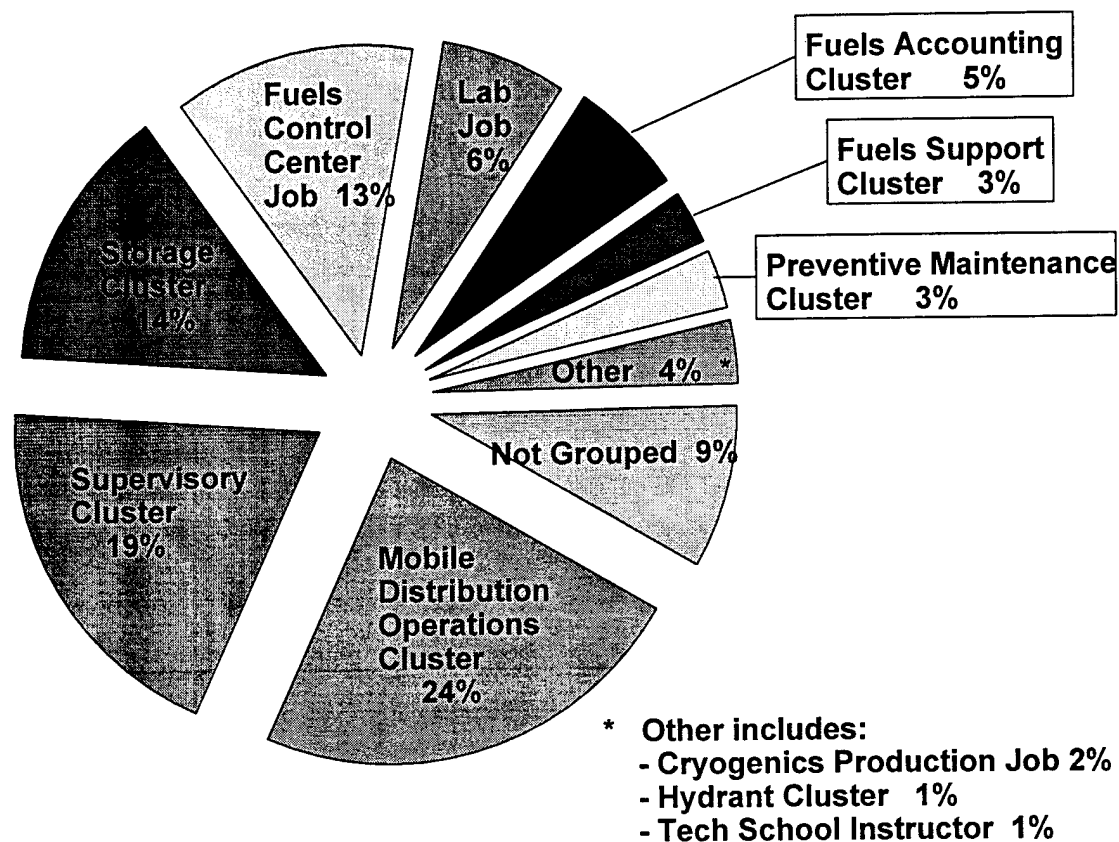


FIGURE 1

Group Descriptions

The following paragraphs contain brief descriptions of the clusters and independent jobs identified in the career ladder analysis. The amount of time members of career ladder jobs spend on duties is presented in Table 3, while selected background data is presented in Table 4. Brief descriptions of each job are presented below, and representative tasks performed are listed in Appendix A.

Another way to illustrate these jobs is to summarize tasks performed into groups of tasks (task modules). Task modules (TM) allow for a very concise display of where job incumbents spend most of their time and develops a comprehensive overview of each job. The task module display shows the number of tasks included in a module, the average percent time spent on that module by cluster or job incumbents, and the average percent members of the cluster or job who perform the tasks of that TM. TMs are identified through CODAP coperformance clustering. The assumption is that tasks which are coperformed by the same sets of incumbents share common knowledges, skills, abilities, and other characteristics. Coperformance clustering determines the average probability that members who perform one task will also perform a

TIME SPENT ACROSS DUTIES BY CAREER LADDER JOBS
(RELATIVE PERCENT OF TIME SPENT)

DUTIES	MOBILE		PRVNT MAINT (N=47)	HYDRANTS (N=56)	STORAGE (N=224)	CRYO PROD (N=26)	FUEL LAB (N=98)	FUELS		MGMT (N=318)	FUELS SUPP (N=6)	FUELS ACCT (N=107)	TECH SCHOOL INST (N=7)
	DIST OPS (N=378)												
A ORGANIZING AND PLANNING	1		6	3	1	8	3	4	15		8	5	5
B DIRECTING AND IMPLEMENTING	1		8	6	3	10	5	8	19		13	8	11
C INSPECTING AND EVALUATING	*		8	5	2	6	3	5	21		7	4	2
D TRAINING	1		4	2	2	9	3	3	10		45	3	33
E PERFORMING GENERAL, ENVIRONMENTAL, OR SAFETY ACTIVITIES	11		38	22	20	10	12	2	7		2	2	13
F PERFORMING BULK STORAGE OR SERVICE STATION ACTIVITIES	8		3	13	42	*	1	1	5		0	*	6
G PERFORMING FUELS DISTRIBUTION ACTIVITIES	75		31	48	11	*	3	3	10		*	*	25
H PERFORMING FUELS ADMINISTRATION OR ACCOUNTING ACTIVITIES	*		*	*	*	1	*	1	3		1	76	2

* Denotes less than 1 percent

TABLE 3 (CONTINUED)

TIME SPENT ACROSS DUTIES BY CAREER LADDER JOBS
(RELATIVE PERCENT OF TIME SPENT)

DUTIES	MOB		PRVNT MAINT	HYDRANT S	STORAGE	CRYO PROD	FUEL LAB	FUELS CONTROL CENTER	MGMT	FUELS SUPP	FUELS ACCT	TECH SCHOOL INST
	(N=378)	(N=47)										
I PERFORMING FUELS CONTROL CENTER (FCC) ACTIVITIES	*	*	*	2	*	1	72	4	*	*	2	
J PERFORMING QUALITY CONTROL AND INSPECTION (QCI) LABORATORY ACTIVITIES	*	1	*	1	3	62	*	*	0	*	0	
K PERFORMING QUALITY CONTROL INSPECTION (QCI) EVALUATOR ACTIVITIES	*	*	*	*	*	5	*	4	*	*	0	
L PERFORMING CRYOGENICS PRODUCTION OR STORAGE ACTIVITIES	1	*	*	16	50	*	*	1	0	*	0	
M PERFORMING FUELS SUPPORT ACTIVITIES	1	*	*	*	2	*	*	*	23	*	1	

* Denotes less than 1 percent

TABLE 4

SELECTED BACKGROUND DATA ON PERSONNEL IN CAREER LADDER JOBS

	MOBILE		PRVNT MAINT (STG 83)	HYDRANTS (STG 80)	STORAGE (STG 48)	CRYO PROD (STG 59)	FUELS		MGMT (STG 21)	FUELS SUPPORT (STG 153)	FUELS ACCT (STG 85)	TECH SCHOOL INST (STG 152)
	DIST OPS (STG 60)						FUEL LAB (STG 178)	CONTROL CENTER (STG 151)				
NUMBER IN GROUP	378		47	56	224	26	98	207	318	49	107	7
PERCENT OF TOTAL SAMPLE	24%		3%	3%	14%	2	6	13	20%	3%	7%	*
PERCENT IN CONUS	73%		77%	77%	73%	19%	66%	68%	74%	76%	64%	100%

SKILL LEVEL DISTRIBUTION												
2F031	24%	15%	9%	150%	0%	6%	0%	1%	2%	7%	0%	0%
2F051	75%	60%	71%	70%	58%	63%	64%	22%	35%	63%	29%	29%
2F071	1%	26%	20%	15%	42%	30%	35%	62%	63%	31%	71%	71%
2F091	0%	0%	0%	0%	0%	1%	0%	12%	0%	0%	0%	0%
2F000	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%

PAYGRADE DISTRIBUTION												
AIRMEN	44%	13%	21%	28%	8%	6%	2%	2%	0%	7%	0%	0%
E-4	53%	38%	45%	48%	27%	48%	33%	5%	20%	46%	0%	0%
E-5	2%	34%	18%	18%	27%	28%	51%	29%	35%	25%	86%	86%
E-6	0%	13%	16%	4%	23%	13%	11%	24%	35%	19%	14%	14%
E-7	0%	2%	0%	1%	15%	5%	3%	30%	10%	4%	0%	0%
E-8	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	0%	0%
E-9	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%

AVERAGE MONTHS IN PRESENT JOB	27	19	27	22	16	15	23	27	22	24	29	29
AVERAGE MONTHS TAFMS	45	93	86	70	123	96	113	173	133	90	121	121
PERCENT FIRST ENLISTMENT	69%	29%	35%	47%	12%	23%	8%	3%	6%	23	0%	0%
AVERAGE NUMBER OF TASKS PERFORMED	15	29	24	40	64	60	33	55	49	46	33	33

* Denotes less than 1 percent

second task or group of related tasks. Representative task modules are listed as part of each job description. The list of TMs, with respective tasks, is presented in Appendix B.

I. MOBILE DISTRIBUTION OPERATIONS CLUSTER (STG60, N=378).

Members of this cluster perform the basic technical functions of refueling and defueling operations. These functions include operating and inspecting fuel trucks and vehicles, transferring fuel from storage tanks to trucks (and vice-versa) using hydrant systems, and fueling aircraft. The rest of the technical jobs in the career ladder are basically specializations of these basic functions. The jobs performed are very limited in scope as members of the cluster perform only an average of 15 of the 351 tasks in the inventory, with seventy-five percent of job time being focused on performing these few tasks. Since this is the basic function of the career ladder, most personnel are very new. Sixty-nine percent are in their first enlistment, 97 percent are in the grades of E-1 to E-4, and the average time on the job is 27 months. Five independent job types were identified within this cluster. These jobs include the same basic tasks, but the jobs have some added emphasis on other functions. The Entry Level Job entails a very limited range of activities as members perform an average of only seven tasks, which is very typical of entry level personnel. The Mobility Distribution Job is performed by 323 people who perform the core duties of fuels distribution. Next is the Mobile Distribution Safety and Inspections Job in which about 20 percent of job time is focused on safety and inspection issues. The Mobile Distribution and Quality Control Job group is distinguished by the time members spend performing quality control and fuel sampling tasks. The last job, Cryogenics Distribution Job, is distinguished by the amount of job time spent working with cryogenic products. Representative tasks for the cluster include:

- perform normal flightline refueling or defueling servicing operations
- inspect mobile fuels distribution vehicles
- perform operator maintenance on mobile fuels distribution vehicles
- perform concurrent servicing operations
- perform emergency shutdown procedures on fuels distribution vehicles
- operate hydrant systems to issue, defuel, store, transfer or receive petroleum products
- perform cold integrated combat turnaround (ICT) servicing operations
- perform multisource refueling servicing operations
- visually inspect fuel samples for water, color, or contaminants
- perform issue-from-bulk or return-to-bulk operations using mobile refueling vehicles

Representative task modules for this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Avg. Percent Members Perf.
0023	MOBILE DISTRIBUTION OPERATIONS	13	60	54
0022	HYDRANTS	10	14	22
0021	SAFETY INSPECTIONS	13	6	11

Task module data show time is focused mainly in the mobile distribution operations module, and the rest of the time is focused on distribution operations support modules.

Personnel in this cluster average 45 months Total Active Federal Military Service (TAFMS), with 69 percent in their first enlistment. Seventy-five percent hold the 5-skill level. Eighty-three percent identify themselves as being Mobile Distribution Operators.

II. PREVENTIVE MAINTENANCE CLUSTER (STG83, N=47). Members in this cluster are primarily responsible for performing preventive maintenance and inspections of safety equipment. Typical duties include performing operator maintenance, inspecting equipment, and inspecting safety devices. This cluster is distinguished from the previous cluster because members spend considerably more time on safety issues, and only a third of the time on basic fueling operations. There are two jobs in this cluster. One is strictly technical, while the second has an emphasis on supervisory tasks. Personnel perform an average of 24 tasks indicating a somewhat broader range of responsibilities than the initial job cluster. Personnel performing in this cluster are distinguished by the time they spend on the following tasks:

- perform operator maintenance on mobile fuels distribution vehicles
- inspect mobile fuels distribution vehicles
- visually inspect fuel samples for water, color, or contaminants
- maintain personal safety equipment
- perform normal flightline refueling or defueling servicing operations
- inspect emergency showers
- dispose of hazardous waste materials
- coordinate mobile refueling vehicle maintenance with base refueling maintenance
- inspect permanently-installed emergency eyewashers
- perform emergency shutdown procedures on fuels distribution vehicles

Representative task modules for this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Avg. Percent Members Perf.
0021	SAFETY INSPECTIONS	13	29	59
0023	MOBILE DISTRIBUTION OPERATIONS	13	26	47
0016	FIRST-LINE SUPERVISORS	15	15	33

As expected, job time is spent mostly on safety inspections and maintenance tasks which fall under the safety inspection task module.

Personnel in this cluster average 92 months TAFMS, with 29 percent in their first enlistment. Paygrades range from E-3 to E-7, with 72 percent being E-4 or E-5. Sixty percent hold the 5-skill level.

III. HYDRANT CLUSTER (STG80, N=56). This job is performed by personnel who work almost exclusively with hydrants and hydrant systems. They spend their time operating hydrant systems to issue, defuel, store, transfer, or receive petroleum products. This group spends less time than the first job cluster on fuels distribution activities, and more time on bulk storage and service station activities, since this is where hydrant systems are predominately located. The distinction between the two jobs identified in this cluster, Hydrant Systems Operators and Hydrant System Supervisors, focuses mainly on supervisory tasks being performed by the supervisors. Personnel perform an average of 23 tasks, again suggesting a similar range of responsibilities like that seen in the Preventive Maintenance, but a broader range than the Mobile Distribution Operations Cluster. Some representative tasks which distinguish this cluster are as follows:

- operate hydrant systems to issue, defuel, store, transfer or receive petroleum products
- inspect hydrant systems
- drain water from hydrant systems
- perform operator maintenance on hydrant systems
- flush hydrant systems
- perform emergency shutdown procedures on hydrants
- inspect emergency showers
- visually inspect fuel samples for water, color, or contaminants
- maintain lateral control pits or outlets
- coordinate hydrant facility maintenance with BCEs

Representative task modules for this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Avg. Percent Members Perf.
0022	HYDRANTS	10	42	71
0021	SAFETY INSPECTIONS	13	15	33
0023	MOBILE DISTRIBUTION OPERATIONS	13	11	19
0020	BULK STORAGE	17	12	14

As expected, the Hydrants module is the most predominant module for this group, with tasks in this module being performed by an average of 71 percent of group members. Members of this job average 85 months TAFMS, with 35 percent in their first enlistment. All hydrant operator personnel are in paygrade E-5 or below, with 85 percent holding the 5-skill level. Supervisors are predominantly E-5 and E-6 (71 percent), with 59 percent holding the 7-skill level.

IV. STORAGE CLUSTER (STG48, N=224). Personnel working within this cluster are responsible for operating and maintaining fuels and cryogenics storage facilities. This cluster is distinguished by the fact that very little time is spent on distributing fuel. There are several distinct jobs within this cluster. In the first job are the entry level personnel who perform the basic duties of receiving, storing, and issuing fuel. This job is also characterized by a very small average number of tasks performed (12), typical of personnel being introduced to a new job. The Distribution and Storage job is kind of a transition between the Mobile Distribution Operations Cluster and the Storage Cluster. Incumbents in this job spend more time on distribution activities than storage activities. However, rather than relying on storage personnel to supply them, they also perform the storage activities associated with distribution of fuel. The next job is broader, and incumbents perform the day-to-day operations of fuel storage facilities, to include some fuel distribution tasks. This is a very diverse job with an average of 39 tasks being performed. The last job includes persons who work in the cryogenics storage areas specializing in problems specific to handling and storing cryogenics products. Representative tasks which distinguish this cluster are as follows:

- operate bulk storage systems to issue, receive, store or transfer fuel
- gauge bulk storage tanks for fuel quantity or temperature
- coordinate fuel transfers with fuels control center (FCC)
- perform issue-from-bulk or return-to-bulk operations using mobile refueling vehicles
- perform recurring inspection of bulk storage facilities
- perform operator maintenance on bulk storage facilities
- drain water from bulk storage tanks
- maintain service station facilities
- gauge fuel shipments for water
- operate automated service station to issue, receive, store, or transfer fuel

Representative task modules for this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Avg. Percent Members Perf.
0020	BULK STORAGE	17	39	73
0021	SAFETY INSPECTIONS	13	14	46
0023	MOBILE DISTRIBUTION OPERATIONS	13	13	35
0019	CRYOGENICS	30	16	21

Much of the job time for this cluster is spent in the first three modules, Bulk Storage, Safety Inspections, and Mobile Distribution Operations, accounting for 66 percent of total job time. The rest of job time is focused on more technical types of tasks. Cluster members average 70 months TAFMS. Forty-eight percent are E-4s, with 70 percent of the group holding the 5-skill level

V. CRYOGENICS PRODUCTION JOB (STG159, N=26). Personnel holding the Cryogenics Production Job are responsible for producing, receiving, issuing, or transferring cryogenic products, such as liquid oxygen (LOX) and liquid nitrogen (LIN). Due to the inherent dangers associated with these substances, an in depth knowledge and practice of safety precautions is required by this group, which would account for the relatively high number of tasks (64) performed. This is a very specialized job. Most members (81 percent) reside outside the CONUS, and they are the third most senior group in the study. Representative tasks are as follows:

- issue, receive, or transfer cryogenic products
- perform odor or particulate tests on liquid oxygen (LOX)
- verify AFTO Forms 244 (Industrial/Support Equipment Record) for Red X items
- maintain cryogenic storage areas
- produce LOX or liquid nitrogen (LIN)
- perform purity tests on cryogenic products
- maintain cryogenic safety equipment
- monitor pressure on cryogenic production plants
- maintain cryotainers
- perform operator maintenance on cryogenic production plants
- obtain vacuum readings

Representative task modules for this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Avg. Percent Members Perf.
0019	CRYOGENICS	30	50	83
0021	SAFETY INSPECTION	13	9	45
0016	FIRST-LINE SUPERVISORS	15	10	47

Eighty-three percent of job members perform tasks in the Cryogenics module. The rest of job time is spent in support and ancillary task modules. This is a very experienced group, averaging 123 months TAFMS. They are spread evenly between paygrades E-4 through E-6. Fifty-eight percent hold the 5-skill level and the remaining 42 percent hold the 7-skill level.

VI. FUEL LABORATORY JOB (STG178, N=98). This job is comprised of lab technicians and supervisors who are responsible for operating and maintaining lab facilities to inspect the quality of fuels. This job is very different from the rest of the career ladder, but it serves a very critical function, ensuring that only the highest quality products are being received. Personnel in this job perform an average of 60 tasks, which indicates a complex, comprehensive job. Representative tasks include:

- draw petroleum samples using in-line samplers
- perform total solid sediment tests using single-filter weight monitor
- perform conductivity tests
- prepare laboratory samples for testing
- perform aeronautical engineering laboratory (AEL) water tests
- perform total solid sediment tests using bottle methods
- clean laboratory testing equipment
- maintain laboratory testing equipment
- determine fuel system ice inhibitor (FSII) content

Representative task modules for this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Avg. Percent Members Perf.
0018	LABORATORY	38	65	76
0021	SAFETY INSPECTIONS	13	8	39

Seventy-six percent of these personnel are paygrade E-4 or E-5. They average 96 months TAFMS. Sixty-three percent hold the 5-skill level.

VII. FUELS CONTROL CENTER JOB (STG151, N=207). Members performing this job dispatch fuel requests, direct fueling operations, maintain schedules and maintenance charts, as well as other tasks which keep the flow of products to the customers running smoothly. Personnel perform an average of 33 tasks, and spend 71 percent of their time performing fuels control center activities, which shows a very narrowly defined and focused job. Like Lab personnel, the functions performed by this job are very different from the core of the career ladder, but without them it would be much more difficult for the mission to be accomplished. Members performing this job are distinguished by the time they spend performing the following tasks:

- dispatch fuel requests
- direct mobile fueling operations
- maintain servicing clipboards for mobile fueling vehicles
- maintain status boards, charts or graphs
- coordinate fuel requirements with maintenance job control
- monitor fuel servicing operations
- maintain facilities keys
- direct utilization of fuels equipment
- review aircraft flying schedules
- print automated forms and equipment status log sheets
- maintain intrabase radios

Representative task modules for this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Avg. Percent Members Perf.
0017	FUELS CONTROL CENTER	22	72	88
0016	FIRST-LINE SUPERVISORS	15	9	26

Obviously, members spend the majority of their time (72 percent) in the Fuels Control Center module since this is the main focus of their duties.

This job is performed predominantly by E-4 through E-6 personnel. They average 112 months TAFMS, and 64 percent hold the 5-skill level.

VIII. MANAGEMENT CLUSTER (STG21, N=318). This cluster represents the senior leadership of the career ladder. Jobs identified within this cluster include, First Line Supervisor, Shop Chief, and Quality Control Inspector (QCI). These positions are predominantly filled with senior personnel, senior E-5 through E-8, and in the case of the First Line Supervisor and Shop Chief, entail almost exclusively supervisory type tasks. The QCI job is heavily involved in

quality control and inspection tasks (33 percent of job time) with the remainder of time scattered between supervisory duties. Typical tasks performed by members in this cluster include:

- supervise Fuels Specialists (AFSC 63150)/Fuels Journeymen (AFSC 2F051)
- write EPRs
- conduct performance feedback sessions
- counsel personnel on personal or military-related matters
- plan or schedule work assignments
- evaluate personnel for compliance with performance standards
- conduct or participate in meetings, such as staff meetings, conferences, or workshops other than training
- plan work priorities
- establish performance standards for subordinates
- analyze workload requirements

Representative task modules for this job cluster include:

TM	Module Title	No. of Tasks	Percent Time Spent	Avg. Percent Members Perf.
0016	FIRST-LINE SUPERVISORS	15	29	73
0015	SENIOR SUPERVISORS	6	7	54
0014	TRAINING MONITOR	7	7	43
0010	INSPECTIONS	14	4	14

This cluster represents the management and leadership of the career ladder from first-line supervisor through senior leadership, and the task modules reflect the types of duties that these personnel perform.

Personnel in this cluster average 173 months TAFMS, and 62 percent hold the 7-skill level. The cluster is comprised of three jobs. The first is performed by personnel who work as first-line supervisors. These members average 134 months TAFMS and 88 percent are E-5 or E-6. The next job represents shop chiefs who average 177 months TAFMS. Eighty-one percent of these supervisors are in paygrades E-6 through E-8. Seventy percent of the QCI job members are E-7 and average 195 months TAFMS.

IX. FUELS SUPPORT CLUSTER (STG50, N=49). Personnel assigned to the fuels support cluster focus on supply and training matters. They are primarily responsible for monitoring supply activities, as well as coordinating and tracking training requirements and programs. They perform an average of 42 tasks, which shows that they have a fairly broad range of responsibilities. They assist the rest of the career ladder by handling ancillary tasks such as coordinating supply and mobility issues, issuing safety equipment, and managing training. They are distinguished by the time they spend performing the following tasks:

- coordinate supply or equipment transactions with base supply
- review property custodian authorization/custody receipt listings CA/CRLs
- issue personal safety equipment
- brief fuels management personnel on unit supply situations
- schedule training
- conduct or participate in meetings
- assign personnel to mobility teams
- coordinate mobility status of personnel or equipment with mobility
- determine training requirements
- maintain training equipment
- brief unit personnel on training matters

Representative task modules for this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Avg. Percent Members Perf.
0006	MOBILITY MANAGEMENT	10	21	68
0014	TRAINING MONITOR	7	10	60
0008	TECH SCHOOL INSTRUCTION	7	10	60
0007	CDCs	4	5	60

The task modules indicate how this cluster has the miscellaneous support tasks that are necessary for the day-to-day functioning of the career ladder. Note how only 46 percent of job time is consumed by four modules which indicates a very wide range of responsibilities.

Members in this cluster average 138 months TAFMS, 63 percent hold the 7-skill level, and 35 percent hold the 5-skill level.

X. FUELS ACCOUNTING CLUSTER (STG85, N=107). The fuels accounting cluster is comprised of two jobs serving as accountants and their supervisors. This cluster is responsible for processing issues and receipts, tracking inventories, and monitoring all accounting aspects of the Fuels career ladder. They perform an average of 45 tasks, indicating a job that is about the same complexity as the management and support personnel, but not as complicated as the Laboratory job. Representative tasks include:

- process issues for aviation products
- process issues for ground products
- process transactions via modem
- review inventory forms for aviation products
- review inventory forms for ground products
- encode vehicle identification links

- process receipts for aviation products
- maintain document control files
- process receipts for ground products
- monitor computer rejects, management notices, or delinquent documents
- audit monthly fuels management data reports

Representative task modules for this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Avg. Percent Members Perf.
0003	ACCOUNTING	12	27	77
0004	UPO ACTIVITIES	8	6	34

Sixty-three percent hold the 5-skill level, and 31 percent hold the 7-skill level. They average 94 months TAFMS.

XI. TECH SCHOOL INSTRUCTOR JOB (STG152, N=7). This job is comprised of training personnel from the technical school. They perform both supervisory and instructional tasks; and demonstrate technical tasks of the specialty. The job is most limited as instructors perform an average of only 32 tasks. Representative tasks include:

- administer tests
- inspect mobile fuels distribution vehicles
- evaluate progress of trainees
- visually inspect fuel samples for water, color, or contaminants
- inspect hose carts (H/Cs)
- counsel personnel on personal or military related matters
- score tests
- perform operator maintenance on mobile fuels distribution vehicles
- maintain training records, charts, or graphs
- maintain training equipment
- conduct or participate in meetings
- perform normal flightline refueling or defueling servicing operations
- conduct resident course classroom training

Representative task modules for this job include:

TM	Module Title	No. of Tasks	Percent Time Spent	Avg. Percent Members Perf.
0008	TECH SCHOOL INSTRUCTION	7	17	59
0014	TRAINING MONITOR	7	14	45

All of these personnel are in pay grades E-5or E-6. They average 125 months TAFMS. Seventy-one percent hold the 7-skill level.

Comparison of Current Group Descriptions to Previous Survey

The results of the specialty job analysis were compared to the previous OSR, dated July 1989. Table 5 lists the major jobs identified in the current report and their equivalent jobs from the previous OSR. A review of the jobs identified in the current study shows all jobs were identified in the previous report, however, the jobs reported previously were grouped somewhat differently. Only the Mobility Support Personnel job identified in 1989 did not correspond to any job in the current study.

Summary

The Fuels Management career ladder is fairly diverse. The analysis revealed six clusters and five independent jobs. It is a stable career ladder, with only minor variations noted in job structure over the past 6 years.

TABLE 5

JOB SPECIALTY COMPARISON BETWEEN CURRENT AND 1989 SURVEY

<u>CURRENT (N=1,601)</u>	<u>1989 (N=2,742)</u>
Mobile Distribution Operations Cluster	Mobile Distribution Operations ATC Fuel Personnel
Preventive Maintenance Cluster A. Preventive Maintenance Technician Job B. Preventive Maintenance Supervisor Job	Preventive Maintenance Personnel
Hydrant Cluster A. Hydrant Operator Job B. Hydrant Supervisor Job	Fuel Distribution Hydrant Operators Bulk Storage Hydrant Operators
Storage Job	Bulk Storage and Service Station Personnel
First-Line Supervisor Job Shop Chief Job	Fuel Storage, Distribution, and Control Center Supervisors Mobile Distribution Supervisors
Technical School Instructor	Technical School Instructor
Fuel Control Center Job	Fuel Controllers
Quality Control Inspection Job A. Supervisory B. Trainers	Quality Assurance and Inspection Evaluators A. Senior Supervisor B. Trainer
Fuels Support Cluster A. Fuels Support Technician B. Fuels Support Supervisor	Administrative Advisors Fuel Training NCO
Cryogenics Production Job	Cryogenic and Storage Personnel
Fuels Accounting Cluster A. Fuels Accountant Supervisor B. Fuels Accountant Job	Fuel Accounting Personnel
Fuel Laboratory Job	Fuel Laboratory Personnel
Not Identified	Mobility Support Personnel

ANALYSIS OF DAFSC GROUPS

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

The distribution of skill-level groups across career ladder jobs is displayed in Table 6, while Table 7 offers another perspective as it displays percent time spent on each duty across skill-level groups. A typical pattern of career ladder progression is noted within AFSC 2F0X1, with 3-skill level personnel spending most of their time on technical tasks and 5-skill level personnel performing technical jobs with additional training and administrative duties. Seven-skill level personnel perform fewer technical duties and spend more time on administrative-, supervisory-, and managerial-related tasks. Nine-skill level and CEM personnel are clearly the career ladder managers.

Skill-Level Descriptions

DAFSC 2F031. The 170 airmen in the 3-skill level group, representing 11 percent of the survey sample, perform an average of 24 tasks. As shown in Table 6, 32 percent of these airmen are in the Mobile Distribution Operations Cluster. They spend 50 percent of their time performing fuel distribution activities, while the remainder of their time is spent in support functions.

Table 8 displays selected representative tasks performed by a majority of 3-skill level airmen. Examples of tasks likely to be performed include: refueling or defueling aircraft, performing operator maintenance on equipment, and fuel inspections.

DAFSC 2F051. The 908 airmen in the 5-skill level group represent 57 percent of the total survey sample and perform an average of 31 tasks. Table 7 shows that 5-skill level personnel spend 32 percent of their time performing fuel distribution activities; 24 percent on environmental and safety activities, and fuels control center activities; and the rest of their time on supervisory and support functions. Representative tasks performed by 5-skill level incumbents are listed in Table 9.

Five-skill level personnel are differentiated from 3-skill level personnel based upon the level of complexity of technical tasks they perform, as well as by percent of job time spent on supervisory-related tasks. Table 10 gives examples of tasks which best differentiate the 5-skill level personnel from their junior counterparts. Figures show higher percentages of 3-skill level members perform the technical tasks listed in the top half of the table, while higher percentages of 5-skill level members perform the supervisory tasks listed in the bottom half.

TABLE 6

DISTRIBUTION OF DAFSC GROUP MEMBERS ACROSS CAREER LADDER JOBS
(PERCENT)

CAREER LADDER JOBS	2F031 (N=170)	2F051 (N=908)	2F071 (N=460)	2F091 (N=49)	2F000 (N=14)
I. Mobile Distribution Operations Cluster	32	31	*	0	0
II. Preventive Maintenance Cluster					
a. Preventive Maintenance Technician Job	*	1	0	0	0
b. Preventive Maintenance Supervisor Job	2	2	3	0	0
III. Hydrant Cluster					
a. Hydrant Operator Job	2	4	*	0	0
b. Hydrant Supervisor Job	0	*	2	0	0
IV. Storage Job	12	17	8	0	0
V. Cryogenics Production Job	0	2	3	0	0
VI. Fuel Laboratory Job	2	7	7	2	0
VII. Fuels Control Center Job	0	15	17	0	0
VIII. Management Cluster					
a. First-Line Supervisor Job	0	2	4	0	0
b. Shop Chief Job	*	5	36	68	86
c. Quality Control Inspection Job	0	*	6	6	0
IX. Fuels Support Cluster					
a. Fuels Support Technician	*	1	6	0	0
b. Fuels Support Supervisor	0	*	*	0	0
X. Fuels Accounting Cluster					
a. Fuels Accountant Supervisor	0	*	6	0	0
b. Fuels Accountant Job	2	7	*	0	0
XI. Tech School Instructor	0	*	1	0	0
Not Grouped	47	4	*	24	14

TABLE 7

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

DUTIES	2F031 (N=170)	2F051 (N=908)	2F071 (N=460)	2F091 (N=49)	2F000 (N=14)
A. ORGANIZING AND PLANNING	1	3	11	22	27
B. DIRECTING AND IMPLEMENTING	1	5	16	23	19
C. INSPECTING AND EVALUATING	*	3	14	26	31
D. TRAINING	1	3	10	5	7
E. PERFORMING GENERAL, ENVIRONMENTAL, OR SAFETY ACTIVITIES	15	12	8	6	2
F. PERFORMING BULK STORAGE OR SERVICE STATION ACTIVITIES	15	11	6	2	*
G. PERFORMING FUELS DISTRIBUTION ACTIVITIES	50	32	7	2	*
H. PERFORMING FUELS ADMINISTRATION OR ACCOUNTING ACTIVITIES	5	7	5	6	10
I. PERFORMING FUELS CONTROL CENTER (FCC) ACTIVITIES	1	12	12	2	2
J. PERFORMING QUALITY CONTROL INSPECTION (QCI) LABORATORY ACTIVITIES	4	5	3	2	*
K. PERFORMING QUALITY CONTROL INSPECTION (QCI) EVALUATOR ACTIVITIES	*	*	3	3	1
L. PERFORMING CRYOGENICS PRODUCTION OR STORAGE ACTIVITIES	5	5	2	*	*
M. PERFORMING FUELS SUPPORT ACTIVITIES	2	1	2	*	*

* Denotes less than 1 percent

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

TABLE 8
REPRESENTATIVE TASKS PERFORMED
BY DAFSC 2F031 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=170)
G168	Perform normal flightline refueling or defueling servicing operations	67
G171	Perform operator maintenance on mobile fuels distribution vehicles	59
E124	Visually inspect fuel samples for water, color, or contaminants	58
G151	Inspect mobile fuels distribution vehicles	57
G159	Perform concurrent servicing operations	56
G160	Perform emergency shutdown procedures on fuels distribution vehicles	53
F140	Perform issue-from-bulk or return-to-bulk operations	48
E112	Inspect emergency showers	44
G167	Perform multisource refueling servicing operations	42
G157	Operate hydrant systems to issue, defuel, store, transfer or receive petroleum products	37
E117	Investigate fuel gains or losses	35
G149	Inspect hose carts (H/Cs)	32
F128	Gauge bulk storage tanks for fuel quantity or temperature	32
E120	Maintain personal safety equipment	31
G150	Inspect hydrant systems	29
F137	Operate bulk storage systems to issue, receive, store, or transfer fuel	29
G169	Perform operator maintenance on H/Cs	27
F126	Coordinate fuel transfers with fuels control center (FCC) and appropriate agencies	27
G158	Perform cold integrated combat turnaround (ICT) servicing operations	26
G156	Issue demineralized water	26
G147	Drain water from tank trucks or semitrailers	25
G163	Perform hot defueling servicing operations	24
G170	Perform operator maintenance on hydrant systems	23
G162	Perform hardened shelter refueling servicing operations	17

TABLE 9
REPRESENTATIVE TASKS PERFORMED
BY DAFSC 2F051 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=908)
B 42	Supervise Fuels Specialists (AFSC 63150)/Fuels Journeymen (AFSC 2F051)	79
G168	Perform normal flightline refueling or defueling servicing operations	52
E124	Visually inspect fuel samples for water, color, or contaminants	50
G151	Inspect mobile fuels distribution vehicles	44
G171	Perform operator maintenance on mobile fuels distribution vehicles	44
G160	Perform emergency shutdown procedures on fuels distribution vehicles	42
G159	Perform concurrent servicing operations	38
E117	Investigate fuel gains or losses	38
E112	Inspect emergency showers	37
F140	Perform issue-from-bulk or return-to-bulk operations using mobile refueling vehicles	34
E115	Inspect permanently-installed emergency eyewashers	31
G167	Perform multisource refueling servicing operations	30
G157	Operate hydrant systems to issue, defuel, store, transfer or receive petroleum products	29
G158	Perform cold integrated combat turnaround (ICT) servicing operations	27
E120	Maintain personal safety equipment	27
F137	Operate bulk storage systems to issue, receive, store, or transfer fuel	25
F128	Gauge bulk storage tanks for fuel quantity or temperature	25
F126	Coordinate fuel transfers with fuels control center (FCC) and appropriate agencies	24
G150	Inspect hydrant systems	21
G149	Inspect hose carts (H/Cs)	20
G169	Perform operator maintenance on H/Cs	20
G147	Drain water from tank trucks or semitrailers	19
I239	Dispatch fuel requests	19
G156	Issue demineralized water	17

TABLE 10

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 2F031 AND DAFSC 2F051 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	2F031 (N=170)	2F051 (N=908)	DIFFERENCE
G159 Perform concurrent servicing operations	56	38	18
G171 Perform operator maintenance on mobile fuels distribution vehicles	59	44	15
G168 Perform normal flightline refueling or defueling servicing operations	67	52	15
F140 Perform issue-from-bulk or return-to-bulk operations using mobile refueling vehicles	48	34	14
B42 Supervise Fuels Specialists (AFSC 63150)/Fuels Journeymen (AFSC 2F051)	2	21	-19
C68 Write EPRs	2	20	-18
C48 Conduct performance feedback sessions	2	19	-17
I235 Direct ground product fueling operations	1	18	-17
I251 Review aircraft flying schedules	3	19	-16
I 224 Maintain facilities keys	2	18	-16
I239 Dispatch fuel requests	3	19	-16
I246 Maintain servicing clipboards for mobile fueling vehicles	2	18	-16
I249 Notify workcenters of weather warnings	2	17	-15
I247 Maintain status boards, charts or graphs	2	17	-15
B23 Counsel personnel on personal or military-related matters	2	17	-15

DAFSC 2F071. Seven-skill level personnel represent 29 percent of the survey sample and perform an average of 49 tasks. Forty-one percent of their relative job time is spent on tasks in supervisory, managerial, training, and administrative duties. The remainder of their time is dedicated to technical duties (see Table 7). Table 11 lists representative tasks for these incumbents.

Tasks which best distinguish 7-skill level personnel from their junior counterparts are presented in Table 12. As expected, the key difference is a much greater emphasis on supervisory functions. Again the negative values for the differences indicates that the 7-skill level members are performing the same tasks as the 5-skill level members, in addition to their 7-skill level duties.

DAFSC 2F091/00. There are 63 9-skill level and CEM Code respondents in the sample, constituting 4 percent of the total sample. These individuals performed an average of 48 tasks. Group members spend over 80 percent of their duty time on supervisory, managerial, administrative, and training functions (see Table 7). Representative tasks DAFSC 2F091/00 members perform are generally supervisory and managerial in nature, and are listed in Table 13.

Tasks that best distinguish between DAFSC 2F071 and DAFSC 2F091/00 members are listed in table 14. The most notable difference is that the 91/00 personnel perform almost no technical tasks. The technical tasks that are performed by the 7-skill level members appear to deal mainly with quality control and inspections.

Summary

Normal career ladder progression within the AFSC 2F0X1 career ladder is evident, with personnel at the 3-skill level spending the vast majority of their job time performing technical tasks. A slight shift towards supervisory function occurs at the 5-skill level, with members still spending more than 86 percent of their duty time performing technical functions. Personnel at the 7-skill level still perform technical functions, however, the majority of duty time is spent on supervisory functions. Nine-skill level and CEM members are managers of the specialty.

ANALYSIS OF AFMAN 36-2108 SPECIALTY DESCRIPTIONS

Survey data were compared to the *AFMAN 36-2108 Specialty Descriptions* for the Fuels Career Ladder, dated 30 April 1991. The descriptions for the 3-, 5-, 7-, and 9-skill levels were generally accurate, depicting the highly technical aspects of the job, as well as an increase in supervisory responsibilities previously described in the DAFSC analysis.

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2F071 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=460)
C 68 Write EPRs	75
B 23 Counsel personnel on personal or military-related matters	73
C 48 Conduct performance feedback sessions	72
B 42 Supervise Fuels Specialists (AFSC 63150)/Fuels Journeymen (AFSC 2F051)	69
B 20 Conduct or participate in meetings, such as staff meetings, conferences, or workshops, other than training	69
A 15 Plan or schedule work assignments	62
A 16 Plan work priorities	61
C 57 Evaluate personnel for compliance with performance standards	60
B 21 Conduct supervisory orientations of newly assigned personnel	54
A11 Establish performance standards for subordinates	53
B 38 Interpret policies, directives, or procedures for subordinates	47
C 46 Analyze workload requirements	47
D 76 Conduct OJT	47
D 94 Maintain training records, charts, or graphs	47
A 14 Establish work methods or controls	44
A 3 Determine logistics requirements, such as space, personnel, equipment, or supplies	43
E117 Investigate fuel gains or losses	42
D 89 Evaluate personnel for training needs	42
C 55 Evaluate inspection report findings	41
C 63 Evaluate work schedules	40
D 90 Evaluate progress of trainees	39
B 44 Supervise Fuels Supervisors (AFSC 63170)/Fuels Craftsmen (AFSC 2F071)	35
B 40 Supervise Apprentice Fuels Specialists (AFSC 63130)/ Fuels Apprentices (AFSC 2F031)	34
I 248 Monitor fuel servicing operations	28
I251 Review aircraft flying schedules	28
I239 Dispatch fuel requests	23

TABLE 12

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 2F051 AND DAFSC 2F071 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	2F051 (N=908)	2F071 (N=460)	DIFFERENCE
B36 Implement safety or security programs	7	35	-28
C56 Evaluate maintenance of workspace, equipment, or supplies	8	35	-27
D90 Evaluate progress of trainees	11	38	-27
D80 Determine training requirements	6	32	-26
C65 Indorse enlisted performance reports (EPRs)	4	27	-23
D76 Conduct OJT	24	47	-23
A7 Develop safety or security programs	5	28	-23
C66 Investigate accidents or incidents	3	26	-23
B29 Direct maintenance of workspace, equipment, or supplies	11	34	-23
C69 Write operating instructions (OIs)	5	27	-22
A18 Write job or position descriptions	5	26	-21
C58 Evaluate procedures for storage, inventory, or inspection of property items	3	23	-20

TABLE 13

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2F091/00 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=63)
B 20 Conduct or participate in meetings, such as staff meetings, conferences, or workshops, other than training	95
A 3 Determine logistics requirements, such as space, personnel, equipment, or supplies	78
B 23 Counsel personnel on personal or military-related matters	76
A 16 Plan work priorities	76
C 68 Write EPRs	73
A 10 Establish organizational policies	71
C 55 Evaluate inspection report findings	71
A 18 Write job or position descriptions	71
A 1 Assign personnel to duty positions	71
A 17 Schedule personnel for temporary duty (TDY), leaves, or passes	70
C 48 Conduct performance feedback sessions	70
C 65 Indorse enlisted performance reports (EPRs)	70
A 11 Establish performance standards for subordinates	70
B 38 Interpret policies, directives, or procedures for subordinates	68
B 44 Supervise Fuels Supervisors (AFSC 63170)/Fuels Craftsmen (AFSC 2F071)	68
B 21 Conduct supervisory orientations of newly assigned personnel	68
C 46 Analyze workload requirements	67
B 19 Administer award or recognition programs	67
A 15 Plan or schedule work assignments	67
C 53 Evaluate environmental impact of storage or distribution operations	63
C 57 Evaluate personnel for compliance with performance standards	62
A 5 Develop fuels support plans	62
A 14 Establish work methods or controls	60
C 54 Evaluate individuals for promotion, demotion, reclassification, or special awards	60
A 7 Develop safety or security programs	43

TABLE 14

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 2F071 AND DAFSC 2F091/00 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	2F071 (N=460)	2F091/00 (N=63)	DIFFERENCE
E120 Maintain personal safety equipment	33	8	25
G168 Perform normal flightline refueling for defueling servicing operations	25	3	22
E124 Visually inspect fuel samples for water, color, or contaminants	38	17	21
F140 Perform issue-from-bulk or return-to-bulk operations using mobile refueling vehicles	22	2	20
I239 Dispatch fuel requests	23	3	20
B32 Implement energy or fuels conservation programs	16	40	-24
H203 Prepare correspondence	15	37	-22
A9 Draft budget requirements	16	37	-21
B30 Implement cost-reduction programs	12	33	-21
B38 Interpret policies, directives, or procedures for subordinates	47	68	-21
C46 Analyze workload requirements	47	67	-20
B33 Implement operations orders (OPORDs) during mobility exercises	12	32	-20

TRAINING ANALYSIS

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

First-Enlistment Personnel

The survey data captured responses from 503 first-enlistment personnel, representing 31 percent of the survey sample. As displayed in Table 15, approximately 77 percent of their duty time is devoted to dispensing fuel, as defined by these duties: Performing general, environmental, or Safety Activities (15 percent), Performing Bulk Storage or Service Station Activities (15 percent), and Performing Fuels Distribution Activities (47 percent). Table 16 displays some of the tasks performed by first-enlistment personnel, and Figure 2 gives a graphic representation of the job break down.

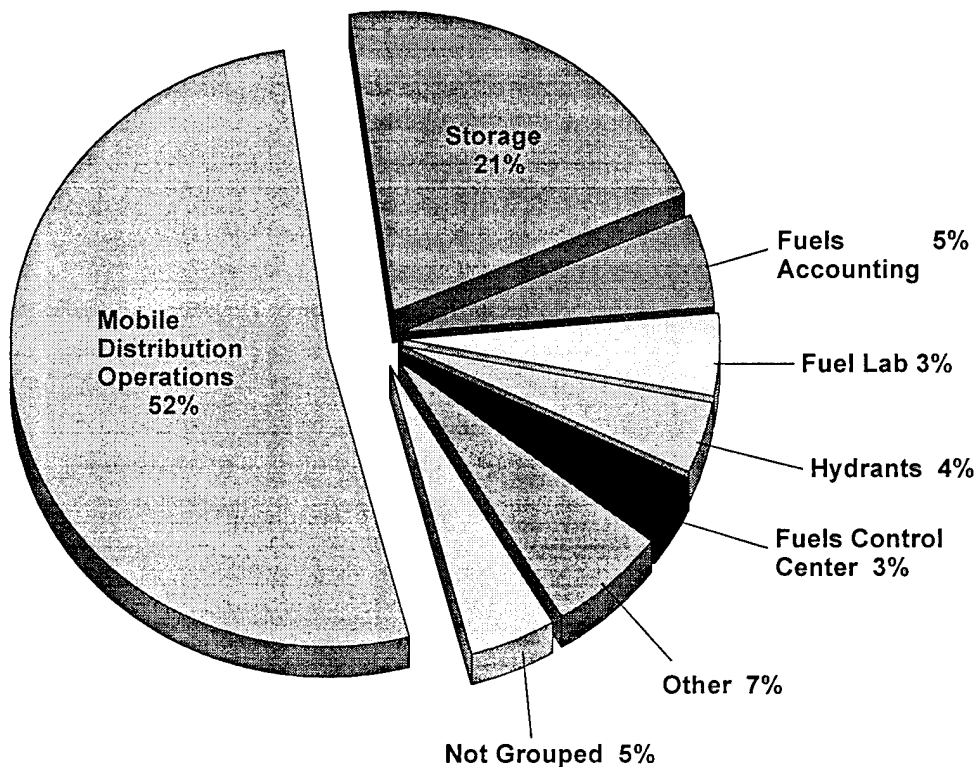


Figure 2

TABLE 15
RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY
FIRST-ENLISTMENT AFSC 2F0X1 PERSONNEL

DUTIES	PERCENT TIME SPENT
A. ORGANIZING AND PLANNING	1
B. DIRECTING AND IMPLEMENTING	1
C. INSPECTING AND EVALUATING	*
D. TRAINING	1
E. PERFORMING GENERAL, ENVIRONMENTAL, OR SAFETY ACTIVITIES	15
F. PERFORMING BULK STORAGE OR SERVICE STATION ACTIVITIES	15
G. PERFORMING FUELS DISTRIBUTION ACTIVITIES	47
H. PERFORMING FUELS ADMINISTRATION OR ACCOUNTING ACTIVITIES	5
I. PERFORMING FUELS CONTROL CENTER (FCC) ACTIVITIES	4
J. PERFORMING QUALITY CONTROL INSPECTION (QCI) LABORATORY ACTIVITIES	4
K. PERFORMING QUALITY CONTROL INSPECTION (QCI) EVALUATOR ACTIVITIES	*
L. PERFORMING CRYOGENICS PRODUCTION OR STORAGE ACTIVITIES	5
M. PERFORMING FUELS SUPPORT ACTIVITIES	1

* Denotes less than 1 percent

NOTE: Numbers do not add to 100 due to rounding

TABLE 16

REPRESENTATIVE TASKS PERFORMED BY FIRST-ENLISTMENT
AFSC 2F0X1 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=503)
G168 Perform normal flightline refueling or defueling servicing operations	66
G151 Inspect mobile fuels distribution vehicles	57
E124 Visually inspect fuel samples for water, color, or contaminants	57
G160 Perform emergency shutdown procedures on fuels distribution vehicles	54
G159 Perform concurrent servicing operations	51
F140 Perform issue-from-bulk or return-to-bulk operations using mobile refueling vehicles	44
G167 Perform multisource refueling servicing operations	42
E112 Inspect emergency showers	40
G157 Operate hydrant systems to issue, defuel, store, transfer or receive petroleum products	37
E117 Investigate fuel gains or losses	37
G158 Perform cold integrated combat turnaround (ICT) servicing operations	34
F137 Operate bulk storage systems to issue, receive, store, or transfer fuel	32
E115 Inspect permanently-installed emergency eyewashers	31
F128 Gauge bulk storage tanks for fuel quantity or temperature	30
G149 Inspect hose carts (H/Cs)	27
G150 Inspect hydrant systems	27
G161 Perform emergency shutdown procedures on hydrants	27
G147 Drain water from tank trucks or semitrailers	26
G169 Perform operator maintenance on H/Cs	26
F126 Coordinate fuel transfers with fuels control center (FCC) and appropriate agencies	26
E120 Maintain personal safety equipment	26
G156 Issue demineralized water	24
G163 Perform hot defueling servicing operations	21
G162 Perform hardened shelter refueling servicing operations	18

Table 17 shows different types of equipment used by first-enlistment personnel, including tank trucks, fuel bowzers, hose carts, and tool kits. This is consistent with the fact that first-enlistment personnel were mainly found in the Mobile Distribution Operations and the Storage Cluster.

To help training personnel focus on tasks which are most appropriate for entry-level training, an additional factor, the Automated Training Indicator (ATI), was assigned to each task in the inventory. A computer program considered percent first-enlistment members performing, TE and TD ratings, and the Course Training Decision Table found in AETCR 52-22, Atch 1, to assign the value to each task corresponding to the 18 training decisions on the table. The decision table and explanation of ATIs precede the listing of tasks in descending order of ATI in the Training Extract.

Tasks having the highest TE ratings are listed in Table 18. Included for each task are the percentage of first-job and first-enlistment personnel performing and TD rating. As illustrated in the table, most of these tasks relate to common, technical maintenance. Furthermore, many of them have high percent members performing, as well as a high TD rating.

Table 19 lists the tasks having the highest TD ratings. The percentage of first-job, first-enlistment, 5-, and 7-skill level personnel performing, and TE ratings are also included. These tasks are primarily complex, technical functions and some supervisory and management tasks. Many of tasks exhibit low TE and are performed by relatively low percentages of 5- and 7-skill level members.

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

Specialty Training Standard (STS)

Technical school personnel from the 363d Technical Training Squadron at Sheppard AFB TX matched JI tasks to sections and subsections of the Fuels STS. A listing of the STS was then produced, showing tasks matched, percent members performing the tasks, TE and TD ratings, and ATI for each task. These listings are included in the Training Extract. Any element with matched tasks performed by 20 percent or more of members from at least one of the career ladder job groups is considered to be supported and should be part of the STS.

Paragraphs 1 through 5 deal with general topics of safety, supervision, training, technical publications, and management. Because these paragraphs deal with general topics, they were not reviewed. Paragraphs 6 through 13 cover the common aspects of the career ladder.

Using standard AETC criteria and percentages of first-job, first-enlistment, 5-, and 7-skill level 2F0X1 members performing matched tasks, all STS entries with matched items are well

TABLE 17

EQUIPMENT USED OR MAINTAINED BY MORE THAN 10 PERCENT
OF FIRST-ENLISTMENT PERSONNEL

EQUIPMENT	PERCENT MEMBERS RESPONDING
R-11 Tank Truck	73
C-300 Tank Truck	72
Fuel Bowser	58
R-9 Tank Truck	54
Gauging Tape and Bob	51
Hose Cart (H/C)	40
Tool Kit	32
Type II (Pritchard/Mod Pritchard) Hydrant System	31
Generator	30
Type III (Phillips) Hydrant Systems	30
Thermometer	29
Intrabase Radio	28
A-2 Tank Truck	27
R-12 Hydrant Servicing Vehicle	27
Air Compressor	21
C-301 Tank Truck	20
Cryotainer	19
Type I (Panero/Modified Panero) Hydrant System	18
Weighted Bottle Sampler	16
GRU-17E Pantograph	15
Bacon Bomb Sampler	14
Hydraulic Jack	14
Multimeter	13
Digital Conductivity Meter	12
In-line Sampler	12
PMU-27M Trailer	12
Steam Cleaner	11
Type IV (Pantograph) Hydrant System	10

TABLE 18

EXAMPLE OF TASKS WITH HIGHEST TRAINING EMPHASIS RATINGS

TASKS	TNG EMP	PERCENT MEMBERS PERFORMING			TSK DIFF
		IST JOB	1ST ENL		
G 160	7.58	63	54	4.00	
G 161	7.46	26	27	3.94	
E 124	7.18	58	57	3.11	
G 151	7.10	64	57	4.53	
F 137	7.00	32	32	4.82	
G 157	6.98	37	37	4.75	
F 139	6.88	26	24	3.86	
G 150	6.70	26	27	4.16	
G 168	6.68	75	66	4.36	
F 138	6.66	17	17	3.57	
G 149	6.56	25	27	3.68	
F 128	6.50	36	30	3.04	
F 140	6.48	51	44	4.28	
G 159	6.44	58	51	5.45	
F 130	6.40	25	21	2.44	
tank cars, or tank trucks					
G 154	6.38	7	10	4.41	
G 155	6.32	10	13	4.28	
F 136	6.32	17	19	3.81	
F 141	6.28	20	22	4.78	
G 171	6.28	67	57	4.44	
F 135	6.28	27	24	3.61	
G 158	6.28	42	34	5.45	
J 264	6.26	4	6	5.15	
G 165	6.18	18	19	5.79	
F 131	6.18	7	11	3.80	
F 127	6.08	23	22	3.19	
F 129	6.00	20	20	2.81	
F 142	5.94	17	19	4.61	
G 164	5.84	10	10	5.95	

TABLE 19

EXAMPLE TASKS WITH HIGHEST TASK DIFFICULTY

TASKS	TSK DIFF	PERCENT MEMBERS PERFORMING							TNG EMP
		1ST JOB	1ST ENL	5- LVL	7- LVL				
A 5	7.75	3	2	4	22				1.40
A 9	7.39	3	2	5	16				.58
C 53	7.32	2	1	3	22				1.82
C 71	7.13	1	1	2	16				.56
D 82	7.12	2	1	2	3				.64
L 326	7.11	1	1	2	2				3.42
L 327	7.11	1	1	2	2				3.12
C 52	6.99	1	1	3	10				.44
C 51	6.95	1	1	2	7				.42
C 49	6.95	2	1	2	8				.50
M 350	6.79	1	1	1	1				3.60
K 292	6.73	0	0	1	11				1.12
M 349	6.72	0	1	1	0				3.46
D 83	6.70	1	1	2	7				.86
A 4	6.65	3	2	4	14				1.28
C 70	6.61	1	0	2	10				1.12
C 67	6.57	1	0	1	9				.82
H 186	6.55	1	3	6	12				3.90
B 30	6.54	3	2	4	12				1.68
A 10	6.51	4	2	3	22				.74
B 33	6.42	4	2	3	12				1.02
C 69	6.41	1	1	5	27				1.56
A 8	6.37	3	4	6	22				.86
B 34	6.36	3	2	5	20				1.12
L 316	6.34	1	1	2	2				2.96
J 266	6.32	1	3	5	5				4.50
C 68	6.32	1	0	20	75				3.04

supported by the OSR data. Two tasks, *E108 Dispose of hazardous waste materials* and *E120 Maintain personal safety equipment*, were not matched to any of the STS elements. They have both high TE and TD, and are performed by at least 20 percent of criterion group members. These two tasks should be reviewed by training personnel to be considered for inclusion in the STS.

Plan of Instruction (POI)

JI tasks were also matched by technical school instructors to related learning objectives in POI JABR63130, dated 4 October 1993. The method employed was similar to that of the STS analysis. The data examined included percent members performing data by job for first-enlistment (1-48 months TAFMS) personnel, as well as TE and TD.

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

Review of the tasks matched to the POI reveals that all of the 51 matched learning objectives are supported by OSR data. Many technical tasks performed by more than 30 percent of at least one first-enlistment job group; however, are not matched to POI objectives (see Table 21). Many of these tasks may warrant resident training. Training personnel should review the list of tasks not referenced to the POI, presented in the Training Extract, for possible course inclusion determinations.

JOB SATISFACTION ANALYSIS

An examination of job satisfaction indicators can give career ladder managers a better understanding of factors that may affect job performance of career ladder airmen. Therefore, the survey booklet included questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions. The responses of the current survey sample were then analyzed by making several comparisons: (1) among AFSC 2F0X1 TAFMS groups and a comparative sample of personnel from other Direct Support career ladders surveyed in 1993 (AFSCs 1T1X1, 2R0X1, 2R1X1), (2) between current and previous survey TAFMS groups, and (3) across specialty jobs identified in the **SPECIALTY JOBS** section of this report.

Table 20 compares first-enlistment (1-48 months TAFMS), second-enlistment (49-96 months TAFMS), and career (97+ months TAFMS) group data to corresponding enlistment groups from other Direct Support AFSCs surveyed during the previous calendar year. These data give a relative measure of how the job satisfaction of AFSC 2F0X1 personnel compares with similar Air Force specialties. Fuels personnel expressed a marked decrease in job satisfaction in the 1-48 months TAFMS and 49-96 months TAFMS groups. The 97+ months TAFMS group showed no significant difference.

An indication of changes in job satisfaction perceptions within the career ladder is provided in Table 21, which presents TAFMS group data for current respondents, and data from respondents to the last OSR. Generally, perceptions associated with job satisfaction have remained the same for all TAFMS groups.

Table 22 presents job satisfaction data for the clusters and independent jobs identified in the career ladder structure. An examination of the data can reveal the influences of performing certain jobs on overall job satisfaction. Personnel in the Mobile Distribution Operations Cluster, Preventive Maintenance Cluster, Hydrants Cluster, and Storage Job have lower job interest and sense of accomplishment and feel their talents are not used as well. It is interesting to note that these jobs are predominantly manned by first-enlistment personnel, who traditionally have lower percentages of positive job satisfaction responses.

Summary

Overall, AFSC 2F0X1 respondents indicate that there may be some job satisfaction concerns in the lower ranks. When compared to other direct support specialties surveyed in 1993, AFSC 2F0X1 personnel show somewhat lower job satisfaction in the 1-48 months and 49-96 months TAFMS groups. When compared to the 1989 OSR, there has been no significant change in job satisfaction.

TABLE 20

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 2F0X1 TAFMS GROUPS
IN CURRENT STUDY TO A COMPARATIVE SAMPLE
(PERCENT MEMBERS RESPONDING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	CURRENT (N=503)	SAMPLE (N=767)	CURRENT (N=406)	SAMPLE (N=2,981)	CURRENT (N=692)	SAMPLE (N=1,514)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	56	66	59	73	72	76
SO-SO	26	22	24	17	18	14
DULL	18	12	17	10	9	10
<u>PERCEIVED USE OF TALENTS:</u>						
FAIRLY WELL TO EXCELLENT LITTLE OR NOT AT ALL	44 56	70 30	68 32	79 21	82 18	83 17
<u>PERCEIVED USE OF TRAINING:</u>						
FAIRLY WELL TO EXCELLENT LITTLE OR NOT AT ALL	94 6	91 9	88 12	83 17	87 13	79 21
<u>SENSE OF ACCOMPLISHMENT:</u>						
SATISFIED	59	72	65	74	73	75
NEUTRAL	25	16	17	11	11	9
DISSATISFIED	16	12	18	15	17	16
<u>REENLISTMENT INTENTIONS:</u>						
PLAN TO REENLIST	67	64	79	71	75	78
PLAN NOT TO REENLIST	33	36	21	19	8	8
PLAN TO RETIRE	0	0	0	10	17	14

NOTE: Comparative data are from 13 Mission Equipment Maintenance AFSCs surveyed in 1993

TABLE 21

COMPARISON OF AFSC 2FOX1 JOB SATISFACTION INDICATORS
FOR CURRENT AND PREVIOUS SURVEY
(PERCENT MEMBERS RESPONDING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	CURRENT (N=503)	1989 (N=1,059)	CURRENT (N=406)	1985 (N=805)	CURRENT (N=692)	1985 (N=875)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	56	55	59	56	72	71
SO-SO	26	25	24	23	18	18
DULL	18	20	17	21	9	11
<u>PERCEIVED USE OF TALENTS:</u>						
FAIRLY WELL TO EXCELLENT LITTLE OR NOT AT ALL	56 44	56 44	68 32	65 35	82 18	83 16
<u>PERCEIVED USE OF TRAINING:</u>						
FAIRLY WELL TO EXCELLENT LITTLE OR NOT AT ALL	94 6	91 9	88 12	86 13	87 13	86 13
<u>SENSE OF ACCOMPLISHMENT:</u>						
SATISFIED	59	59	65	57	73	71
NEUTRAL	25	19	17	18	11	12
DISSATISFIED	16	21	18	25	17	16
<u>REENLISTMENT INTENTIONS:</u>						
PLAN TO REENLIST	67	60	79	75	75	75
PLAN NOT TO REENLIST	33	39	21	24	8	9
PLAN TO RETIRE	0	1	0	1	17	16

TABLE 22

COMPARISON OF JOB SATISFACTION INDICATORS FOR MEMBERS OF AFSC 2F0X1 SPECIALTY JOBS
(PERCENT MEMBERS RESPONDING)

	MOBILE DIST OPS (N=378)	PRVNT MAINT HYDRANT S (N=56)	STORAGE (N=224)	CRYO PROD (N=26)	FUEL LAB (N=98)	FUELS CONTROL CENTER (N=207)	MGMT (N=318)	FUELS SUPP (N=49)	FUELS ACCT (N=107)	TECH SCHOOL INST (N=7)
<u>EXPRESSED JOB INTEREST:</u>										
INTERESTING	47	53	53	96	82	72	70	88	80	100
SO-SO	30	32	27	4	12	17	19	10	15	0
DULL	23	15	20	0	6	10	11	2	5	0
<u>PERCEIVED USE OF TALENTS:</u>										
FAIRLY WELL TO EXCELLENT	47	77	65	92	86	79	79	94	92	100
LITTLE OR NOT AT ALL	52	23	35	8	14	21	21	6	8	0
<u>PERCEIVED USE OF TRAINING:</u>										
FAIRLY WELL TO EXCELLENT	90	89	92	100	98	87	88	76	90	100
LITTLE OR NOT AT ALL	10	11	8	0	2	13	12	24	10	0
<u>SENSE OF ACCOMPLISHMENT:</u>										
SATISFIED	52	64	58	88	86	72	72	78	79	100
NEUTRAL	28	15	23	4	9	12	11	8	12	0
DISSATISFIED	20	21	19	8	5	15	17	14	9	0
<u>REENLISTMENT INTENTIONS:</u>										
PLAN TO REENLIST	66	70	70	84	87	83	73	88	79	86
PLAN NOT TO REENLIST	32	21	27	8	10	10	10	2	18	0
PLAN TO RETIRE	2	9	4	8	3	7	17	10	3	14

IMPLICATIONS

The Fuels (AFSC 2F0X1) career ladder has not changed much since the last survey in 1989. The jobs still involve roughly the same balance of technical maintenance and support functions.

Career ladder progression is typical, with 3- and 5-skill level technicians primarily performing technical functions. The 7-skill level and 9-skill level and CEM personnel assume career ladder management responsibilities.

The *AFMAN 36-2108 Specialty Descriptions* are accurate and the technical training program is sound, as both the STS and POI are **well** supported by survey data. Job satisfaction data show that members of the career ladder are generally very satisfied with their jobs. This career ladder is very stable, and no changes are forecast as of this report.

APPENDIX A

REPRESENTATIVE TASKS PERFORMED BY MEMBERS OF CAREER LADDER JOBS

THIS PAGE INTENTIONALLY LEFT BLANK

MOBILE DISTRIBUTION OPERATIONS CLUSTER
(ST60, N=378)

TASK STATEMENT	PERCENT MEMBERS PERFORMING
G 168 Perform normal flightline refueling or defueling servicing operations	88
G 171 Perform operator maintenance on mobile fuels distribution vehicles	80
G 151 Inspect mobile fuels distribution vehicles	80
G 160 Perform emergency shutdown procedures on fuels distribution vehicles	73
G 159 Perform concurrent servicing operations	71
G 167 Perform multisource refueling servicing operations	58
E 124 Visually inspect fuel samples for water, color, or contaminants	48
G 157 Operate hydrant systems to issue, defuel, store, transfer or receive petroleum products	45
G 158 Perform cold integrated combat turnaround (ICT) servicing operations	45
F 140 Perform issue-from-bulk or return-to-bulk operations using mobile refueling vehicles	36
G 149 Inspect hose carts (H/Cs)	34
G 169 Perform operator maintenance on H/Cs	33
G 147 Drain water from tank trucks or semitrailers	31
G 156 Issue demineralized water	29
G 150 Inspect hydrant systems	26
G 161 Perform emergency shutdown procedures on hydrants	26
G 163 Perform hot defueling servicing operations	26
E 117 Investigate fuel gains or losses	26
G 165 Perform hot refueling servicing operations	24
E 112 Inspect emergency showers	22
G 162 Perform hardened shelter refueling servicing operations	22
G 170 Perform operator maintenance on hydrant systems	20
E 104 Apply reflective tape to equipment	18
G 166 Perform multi-aircraft refueling servicing operations	16
G 152 Inspect pantographs	16
E 120 Maintain personal safety equipment	15
E 115 Inspect permanently-installed emergency eyewashers	15

PREVENTIVE MAINTENANCE CLUSTER
(ST83, N=47)

TASK STATEMENT	PERCENT MEMBERS PERFORMING
G 171 Perform operator maintenance on mobile fuels distribution vehicles	89
E 124 Visually inspect fuel samples for water, color, or contaminants	87
G 151 Inspect mobile fuels distribution vehicles	82
E 120 Maintain personal safety equipment	80
E 112 Inspect emergency showers	76
G 168 Perform normal flightline refueling or defueling servicing operations	74
E 104 Apply reflective tape to equipment	70
E 115 Inspect permanently-installed emergency eyewashers	68
E 114 Inspect markings or decals on waste containers	68
E 108 Dispose of hazardous waste materials	63
G 160 Perform emergency shutdown procedures on fuels distribution vehicles	63
E 110 Inspect condition and cleanliness of protective clothing	61
G 145 Coordinate mobile refueling vehicle maintenance with base refueling maintenance	59
E 119 Maintain hazardous waste spill kits	55
G 155 Isolate contaminated petroleum products found in mobile refueling vehicles	55
E 106 Clean protective clothing or equipment	51
C 68 Write EPRs	51
A 16 Plan work priorities	48
C 48 Conduct performance feedback sessions	48
B 42 Supervise Fuels Specialists (AFSC 63150)/Fuels Journeymen (AFSC 2F051)	46
E 113 Inspect hazardous waste accumulation points	46
E 109 Fill portable emergency eyewashers	44
D 76 Conduct OJT	44
E 116 Inspect portable emergency eyewashers	42
G 147 Drain water from tank trucks or semitrailers	42
E 122 Store hazardous waste materials	42
A 15 Plan or schedule work assignments	42

HYDRANT CLUSTER
(ST80, N=56)

TASK STATEMENT	PERCENT MEMBERS PERFORMING
G 150 Inspect hydrant systems	100
G 157 Operate hydrant systems to issue, defuel, store, transfer or receive petroleum products	98
G 146 Drain water from hydrant systems	94
G 170 Perform operator maintenance on hydrant systems	92
G 161 Perform emergency shutdown procedures on hydrants	87
G 148 Flush hydrant systems	76
E 112 Inspect emergency showers	75
E 124 Visually inspect fuel samples for water, color, or contaminants	66
G 154 Isolate contaminated petroleum products found in hydrant systems	62
E 115 Inspect permanently-installed emergency eyewashers	60
G 144 Coordinate hydrant facility maintenance with BCEs	55
E 117 Investigate fuel gains or losses	50
F 126 Coordinate fuel transfers with fuels control center (FCC) and appropriate agencies	46
F 133 Maintain lateral control pits or outlets	42
E 110 Inspect condition and cleanliness of protective clothing	41
E 108 Dispose of hazardous waste materials	41
G 168 Perform normal flightline refueling or defueling servicing operations	33
E 120 Maintain personal safety equipment	33
E 109 Fill portable emergency eyewashers	32
F 128 Gauge bulk storage tanks for fuel quantity or temperature	30
E 116 Inspect portable emergency eyewashers	30
E 114 Inspect markings or decals on waste containers	30
C 68 Write EPRs	28
C 48 Conduct performance feedback sessions	28
B 42 Supervise Fuels Specialists (AFSC 63150)/Fuels Journeymen (AFSC 2F051)	26
D 76 Conduct OJT	26
B 20 Conduct or participate in meetings, such as staff meetings, conferences, or workshops, other than training	26

STORAGE JOB
(ST148, N=224)

TASK STATEMENT		PERCENT MEMBERS PERFORMING
G 151	Inspect mobile fuels distribution vehicles	100
L 307	Ground cryotainers	100
G 167	Perform multisource refueling servicing operations	100
G 171	Perform operator maintenance on mobile fuels distribution vehicles	100
E 124	Visually inspect fuel samples for water, color, or contaminants	100
E 104	Apply reflective tape to equipment	100
G 158	Perform cold integrated combat turnaround (ICT) servicing operations	66
G 156	Issue demineralized water	66
L 309	Issue, receive, or transfer cryogenic products	66
G 159	Perform concurrent servicing operations	66
F 140	Perform issue-from-bulk or return-to-bulk operations using mobile refueling vehicles	66
E 106	Clean protective clothing or equipment	66
F 135	Operate automated service station to issue, receive, store, or transfer fuel	66
E 107	Coordinate disposal of contaminated petroleum products with defense reutilization marketing office (DRMO)	66
E 108	Dispose of hazardous waste materials	66
G 164	Perform hot ICT servicing operations	33
L 318	Perform odor or particulate tests on liquid oxygen (LOX) cryotainers	33
F 137	Operate bulk storage systems to issue, receive, store, or transfer fuel	33
G 147	Drain water from tank trucks or semitrailers	33
M 338	Inspect fuels mobility support equipment (FMSE)	33
M 345	Participate in mobility exercise processing	33
F 130	Ground or bond receipt vessels or conveyances, such as ocean tankers, barges, railway tank cars, or tank trucks	33
L 317	Perform emergency shutdown procedures on cryogenic plants	33
G 155	Isolate contaminated petroleum products found in mobile refueling vehicles	33

CRYOGENICS PRODUCTION JOB
(ST159, N=26)

TASK STATEMENT	PERCENT MEMBERS PERFORMING
L 309 Issue, receive, or transfer cryogenic products	96
L 318 Perform odor or particulate tests on liquid oxygen (LOX) cryotainers	96
L 332 Verify AFTO Forms 244 (Industrial/Support Equipment Record) for Red X items	96
L 311 Maintain cryogenic storage areas	96
L 310 Maintain cryogenic safety equipment	96
L 315 Obtain vacuum readings	96
L 308 Inventory cryogenic products or equipment	96
L 312 Maintain cryogenic support equipment	96
L 307 Ground cryotainers	96
L 320 Perform purity tests on cryogenic products	92
L 313 Maintain cryotainers	92
L 321 Perform recurring inspections of cryotainers	92
L 329 Purge cryotainers	92
L 305 Dispose of contaminated cryogenic products	92
L 330 Record and maintain historical data on cryogenic production plants	88
L 328 Pull a vacuum	88
L 319 Perform operator maintenance on cryogenic production plants	80
L 316 Perform cryogenic plant defrost operations	80
L 306 Fill cylinders with oxygen or nitrogen	80
L 317 Perform emergency shutdown procedures on cryogenic plants	80
L 326 Produce LOX or liquid nitrogen (LIN)	76
L 314 Monitor pressure on cryogenic production plants	76
E 110 Inspect condition and cleanliness of protective clothing	76
L 327 Produce oxygen or nitrogen gas	73
L 304 Clean pressure and quantity gauges for cryogenic products	73
L 322 Perform recurring inspections on cryogenic production plants	69
L 303 Adjust pressure relief valves	65
E 120 Maintain personal safety equipment	61
A 16 Plan work priorities	61
A 15 Plan or schedule work assignments	61

FUEL LABORATORY JOB
(ST178, N=98)

TASK STATEMENT		PERCENT MEMBERS PERFORMING
J 261	Draw petroleum samples using in-line samplers	100
J 287	Prepare laboratory samples for testing	100
J 283	Perform total solid sediment tests using bottle methods	100
J 285	Perform total solid sediment tests using single-filter weight monitor	98
J 275	Perform fiber tests	98
J 268	Maintain laboratory sampling equipment	97
J 282	Perform time filtrations	97
J 267	Maintain laboratory analysis equipment	97
J 272	Perform conductivity tests	96
J 254	Clean laboratory testing equipment	96
J 262	Establish or maintain crash kits	96
J 269	Perform aeronautical engineering laboratory (AEL) water tests	95
J 253	Analyze aircraft fuel samples in accordance with particle assessment guide	95
J 286	Prepare laboratory samples for shipment	95
J 259	Draw petroleum samples using bomb or weighted bottle samplers	95
J 257	Determine fuel system ice inhibitor (FSII) content	94
J 255	Convert and analyze hydrometer readings	93
J 264	Identify contaminated petroleum products	93
J 265	Identify reclaimable fuels	88
J 284	Perform total solid sediment tests using matched-weight monitor	88
E 124	Visually inspect fuel samples for water, color, or contaminants	87
J 270	Perform aircraft sump sample tests	85
J 276	Perform flash point tests	82
J 256	Coordinate calibration of equipment or gauges with precision measurement equipment laboratory (PMEL)	81
J 260	Draw petroleum samples using Drum Thieves	81
E 112	Inspect emergency showers	80

FUELS CONTROL CENTER JOB
(ST151, N=207)

TASK STATEMENT		PERCENT MEMBERS PERFORMING
I 239	Dispatch fuel requests	98
I 246	Maintain servicing clipboards for mobile fueling vehicles	98
I 251	Review aircraft flying schedules	98
I 249	Notify workcenters of weather warnings	97
I 232	Coordinate fuel requirements with maintenance job control	97
I 244	Maintain facilities keys	97
I 247	Maintain status boards, charts or graphs	95
I 237	Direct mobile fueling operations	95
I 238	Direct utilization of fuels equipment	93
I 248	Monitor fuel servicing operations	91
I 245	Maintain intrabase radios	91
I 235	Direct ground product fueling operations	91
I 242	Inventory intrabase radios	90
I 250	Print automated forms and equipment status log sheets	88
I 233	Coordinate sampling of fuels equipment with quality control and inspection (QCI)	88
I 243	Maintain alert recall rosters	87
I 231	Activate pyramid alert recall plans	86
I 234	Coordinate support services with appropriate agencies	82
I 240	Emboss aviation fuel identaplates	80
I 236	Direct hydrant fueling operations	71
I 252	Review flight schedules from maintenance control center (MCC)	65
B 42	Supervise Fuels Specialists (AFSC 63150)/Fuels Journeymen (AFSC 2F051)	43
B 27	Direct maintenance of status boards, charts, or graphs	41
I 241	Input data into the Fuels Automated Management System (FAMS)	37
C 68	Write EPRs	35
E 117	Investigate fuel gains or losses	35
C 48	Conduct performance feedback sessions	33
A 16	Plan work priorities	31
A 15	Plan or schedule work assignments	31
B 31	Implement disaster preparedness plans	31

MANAGEMENT CLUSTER
(ST21, N=318)

TASK STATEMENT		PERCENT MEMBERS PERFORMING
C 68	Write EPRs	90
C 48	Conduct performance feedback sessions	90
B 23	Counsel personnel on personal or military-related matters	88
A 15	Plan or schedule work assignments	80
C 57	Evaluate personnel for compliance with performance standards	77
B 20	Conduct or participate in meetings, such as staff meetings, conferences, or workshops, other than training	77
B 42	Supervise Fuels Specialists (AFSC 63150)/Fuels Journeymen (AFSC 2F051)	76
A 16	Plan work priorities	73
A 11	Establish performance standards for subordinates	71
B 21	Conduct supervisory orientations of newly assigned personnel	67
C 46	Analyze workload requirements	62
B 38	Interpret policies, directives, or procedures for subordinates	60
A 17	Schedule personnel for temporary duty (TDY), leaves, or passes	59
C 63	Evaluate work schedules	59
C 55	Evaluate inspection report findings	58
C 54	Evaluate individuals for promotion, demotion, reclassification, or special awards	58
A 14	Establish work methods or controls	57
A 1	Assign personnel to duty positions	56
A 3	Determine logistics requirements, such as space, personnel, equipment, or supplies	56
E 117	Investigate fuel gains or losses	55
D 94	Maintain training records, charts, or graphs	50
B 44	Supervise Fuels Supervisors (AFSC 63170)/Fuels Craftsmen (AFSC 2F071)	50
D 89	Evaluate personnel for training needs	48
C 56	Evaluate maintenance of workspace, equipment, or supplies	47
E 124	Visually inspect fuel samples for water, color, or contaminants	46
B 36	Implement safety or security programs	45
B 40	Supervise Apprentice Fuels Specialists (AFSC 63130)/Fuels Apprentices (AFSC 2F031)	44
D 76	Conduct OJT	44
C 65	Indorse enlisted performance reports (EPRs)	44

FUELS SUPPORT CLUSTER
(ST153, N=49)

TASK STATEMENT		PERCENT MEMBERS PERFORMING
D 96	Schedule training	100
M 339	Issue personal safety equipment	89
D 80	Determine training requirements	89
D 72	Administer tests	89
M 333	Assign personnel to mobility teams	86
D 93	Maintain training equipment	86
M 335	Brief fuels management personnel on unit supply situations	83
B 20	Conduct or participate in meetings, such as staff meetings, conferences, or workshops, other than training	83
D 95	Procure training aids, space, or equipment	83
D 94	Maintain training records, charts, or graphs	83
D 92	Maintain study reference files	83
D 97	Score tests	83
D 90	Evaluate progress of trainees	83
M 337	Coordinate supply or equipment transactions with base supply	81
M 336	Coordinate mobility status of personnel or equipment with mobility control centers	81
D 75	Brief unit personnel on training matters	81
D 79	Counsel trainees on training progress	78
M 348	Review property custodian authorization/custody receipt listings (CA/CRLs)	75
M 345	Participate in mobility exercise processing	75
D 99	Verify CDC completions	75
D 103	Write training reports	72
D 81	Develop lesson plans	72
B 21	Conduct supervisory orientations of newly assigned personnel	70
M 334	Audit daily fuels priority monitor reports (D18s)	67
D 89	Evaluate personnel for training needs	67
D 76	Conduct OJT	67
D 88	Establish training standards	67
D 73	Assign on-the-job training (OJT) trainers	67
D 100	Verify enrollments in CDCs	67
D 91	Evaluate training methods, techniques, or programs	64

FUELS ACCOUNTING CLUSTER
(ST85, N=107)

TASK STATEMENT		PERCENT MEMBERS PERFORMING
H 228	Review inventory forms for ground products	87
H 225	Review inventory forms for aviation products	86
H 193	Encode vehicle identification links	85
H 199	Monitor computer rejects, management notices, or delinquent document suspenses	85
H 182	Audit monthly fuels management data reports (M34s)	83
H 207	Process issues for ground products	82
H 219	Process transactions via modem	82
H 201	Monitor pre-positioned war reserve materiel stock (PWRMS) levels	82
H 205	Process issues for aviation products	79
H 195	Maintain document control files	79
H 187	Coordinate fuel accounting matters with accounting and finance office (AFO)	77
H 210	Process receipts for aviation products	75
H 212	Process receipts for ground products	75
H 218	Process reverse-post procedures	74
H 179	Audit daily fuels management data reports (D05s)	73
H 226	Review inventory forms for cryogenic products	72
H 186	Complete reporting emergency petroleum, oils, and lubricants (REPOL) reports	71
H 216	Process requisitions for ground or heating fuels	71
H 214	Process requisitions for aviation products	70
H 178	Audit daily fuels document register reports (D04s)	69
H 177	Audit combat fuels management system reports (D33s)	69
H 190	Coordinate requisitioning of petroleum products with base contracting office	67
H 224	Research document control files	66
H 192	Emboss equipment station plates or ground fuel servoplates	66
H 183	Audit monthly fuels sales analysis reports (M27s)	66
H 188	Coordinate fuel contracts with base contracting office	64
H 189	Coordinate REPOL reports with other internal sections	64
H 194	Generate management reports	62
H 200	Monitor on-order or in-transit inventories	60

TECH SCHOOL INSTRUCTOR JOB
(ST152, N=7)

TASK STATEMENT		PERCENT MEMBERS PERFORMING
D 72	Administer tests	100
G 151	Inspect mobile fuels distribution vehicles	100
E 124	Visually inspect fuel samples for water, color, or contaminants	100
G 149	Inspect hose carts (H/Cs)	100
B 23	Counsel personnel on personal or military-related matters	85
D 97	Score tests	85
G 171	Perform operator maintenance on mobile fuels distribution vehicles	85
D 94	Maintain training records, charts, or graphs	85
D 93	Maintain training equipment	85
B 20	Conduct or participate in meetings, such as staff meetings, conferences, or workshops, other than training	85
G 168	Perform normal flightline refueling or defueling servicing operations	71
G 160	Perform emergency shutdown procedures on fuels distribution vehicles	71
D 90	Evaluate progress of trainees	57
D 78	Conduct resident course classroom training	57
D 79	Counsel trainees on training progress	57
G 169	Perform operator maintenance on H/Cs	57
D 81	Develop lesson plans	57
F 128	Gauge bulk storage tanks for fuel quantity or temperature	57
B 40	Supervise Apprentice Fuels Specialists (AFSC 63130)/Fuels Apprentices (AFSC 2F031)	42
G 147	Drain water from tank trucks or semitrailers	42
G 170	Perform operator maintenance on hydrant systems	42
E 110	Inspect condition and cleanliness of protective clothing	42
D 89	Evaluate personnel for training needs	42
D 95	Procure training aids, space, or equipment	42
A 7	Develop safety or security programs	42
E 112	Inspect emergency showers	42
D 84	Develop training checklists	42
E 120	Maintain personal safety equipment	42

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX B

LISTING OF MODULES AND TASK STATEMENTS

THIS PAGE INTENTIONALLY LEFT BLANK

These Task Modules (TMs) were developed in order to organize and summarize the extensive task information for this specialty. The TMs were derived by statistical clustering of the tasks in terms of which tasks are performed by the same incumbents. For example, if an individual performs one documentation task, the probability is very high that he or she also will perform other documentation tasks. Thus, the group of documentation tasks can be considered a "natural group" of associated or related tasks (see TM 0001 below). The statistical clustering generally approximates these "natural groupings."

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

0001 - MOBILITY MAINTENANCE

- 1 M 338 Inspect fuels mobility support equipment (FMSE)
- 2 M 340 Maintain FMSE
- 3 M 343 Pack or crate Aerial Bulk Fuels Delivery System (ABFDS)
- 4 M 344 Pack or crate Air Transportable Hydrant Refueling System
(ATHRS)
- 5 M 346 Perform controlled bladder inspections of fuel bladders
- 6 M 349 Set up or dismantle ABFDSs
- 7 M 350 Set up or dismantle ATHRSs

0002 - MISSILE PROPELLANTS

- 1 H 208 Process issues for missile propellants
- 2 H 213 Process receipts for missile propellants
- 3 H 217 Process requisitions for missile propellants
- 4 H 223 Process transfers for missile propellants
- 5 H 227 Review inventory forms for demineralized water
- 6 H 229 Review inventory forms for missile propellants

0003 - ACCOUNTING

- 1 H 205 Process issues for aviation products
- 2 H 207 Process issues for ground products
- 3 H 210 Process receipts for aviation products

- 4 H 212 Process receipts for ground products
- 5 H 214 Process requisitions for aviation products
- 6 H 216 Process requisitions for ground or heating fuels
- 7 H 218 Process reverse-post procedures
- 8 H 219 Process transactions via modem
- 9 H 224 Research document control files
- 10 H 225 Review inventory forms for aviation products
- 11 H 226 Review inventory forms for cryogenic products
- 12 H 228 Review inventory forms for ground products

0004 - UPO ACTIVITIES

- 1 H 176 Assign fuel operating instruction (FOI) numbers
- 2 H 191 Distribute correspondence, reports, or publications
- 3 H 196 Maintain organizational directives or TO files
- 4 H 197 Maintain publication files, other than TO files
- 5 H 198 Maintain report suspense system
- 6 H 202 Prepare awards or decorations
- 7 H 203 Prepare correspondence
- 8 H 230 Update pyramid alert recall plans

0005 - TO LIBRARY

- 1 A 12 Establish publication libraries, other than technical order (TO) libraries
- 2 A 13 Establish TO libraries
- 3 B 25 Direct maintenance of administrative files
- 4 B 26 Direct maintenance of publication libraries, other than TO libraries
- 5 B 28 Direct maintenance of TO libraries

0006 - MOBILITY MANAGEMENT

- 1 M 333 Assign personnel to mobility teams
- 2 M 334 Audit daily fuels priority monitor reports (D18s)

- 3 M 335 Brief fuels management personnel on unit supply situations
- 4 M 336 Coordinate mobility status of personnel or equipment with mobility control centers
- 5 M 337 Coordinate supply or equipment transactions with base supply
- 6 M 339 Issue personal safety equipment
- 7 M 341 Maintain forward operating base deployment kits
- 8 M 342 Monitor bench stock of materials
- 9 M 347 Prepare emergency requisitions
- 10 M 348 Review property custodian authorization/custody receipt listings (CA/CRLs)

0007 - CDCs

- 1 D 87 Establish study reference files
- 2 D 92 Maintain study reference files
- 3 D 99 Verify CDC completions
- 4 D 100 Verify enrollments in CDCs

0008 - TECH SCHOOL INSTRUCTION

- 1 D 72 Administer tests
- 2 D 78 Conduct resident course classroom training
- 3 D 93 Maintain training equipment
- 4 D 95 Procure training aids, space, or equipment
- 5 D 97 Score tests
- 6 D 102 Write test questions
- 7 D 103 Write training reports

0009 - TRAINING

- 1 D 73 Assign on-the-job training (OJT) trainers
- 2 D 75 Brief unit personnel on training matters
- 3 D 77 Conduct or participate in training conferences
- 4 D 81 Develop lesson plans
- 5 D 84 Develop training checklists

- 6 D 85 Direct or implement OJT programs
- 7 D 86 Direct or implement training programs, other than OJT
- 8 D 88 Establish training standards
- 9 D 91 Evaluate training methods, techniques, or programs
- 10 D 96 Schedule training
- 11 D 98 Select individuals for specialized training

0010 - INSPECTIONS

- 1 K 289 Brief fuel section supervisors or outside agencies on inspection findings
- 2 K 290 Conduct crossfeed inspections of fuels sections
- 3 K 291 Conduct follow-on inspections of fuels sections receiving unsatisfactory ratings
- 4 K 292 Conduct quarterly inspections of fuels sections
- 5 K 293 Conduct safety inspections of fuels sections
- 6 K 294 Conduct special interest item inspections of fuels sections
- 7 K 295 Conduct special subject inspections of fuels sections
- 8 K 296 Conduct spot-check inspections of fuels operations
- 9 K 297 Distribute inspection reports
- 10 K 298 File inspection reports
- 11 K 299 Monitor danger tag programs
- 12 K 300 Monitor quality control hold programs
- 13 K 301 Perform external inspections on organizational tanks
- 14 K 302 Schedule inspections of fuels sections

0011 - STAFF ASSISTANCE

- 1 C 49 Conduct staff assistance visits
- 2 C 50 Evaluate administrative procedures
- 3 C 51 Evaluate audit procedures
- 4 C 59 Evaluate QAE programs
- 5 C 71 Write staff studies, surveys, or special reports, other than training reports

0012 - MANAGEMENT

-
- 1 A 2 Assign sponsors for new personnel
 - 2 A 4 Develop energy or fuels conservation programs
 - 3 A 5 Develop fuels support plans
 - 4 A 6 Develop organizational charts
 - 5 A 8 Develop working agreements with user maintenance or communications organizations
 - 6 A 9 Draft budget requirements
 - 7 A 10 Establish organizational policies
 - 8 A 18 Write job or position descriptions
 - 9 B 19 Administer award or recognition programs
 - 10 B 30 Implement cost-reduction programs
 - 11 B 31 Implement disaster preparedness plans
 - 12 B 32 Implement energy or fuels conservation programs
 - 13 B 33 Implement operations orders (OPORDs) during mobility exercises
 - 14 B 34 Implement operations plans (OPLANs) during mobility exercises
 - 15 B 35 Implement quality assurance effectiveness (QAE) programs
 - 16 C 52 Evaluate budget requirements
 - 17 C 61 Evaluate unit deployment or mobility plans
 - 18 C 62 Evaluate unit disaster preparedness plans

0013 - SAFETY

- 1 A 7 Develop safety or security programs
- 2 B 36 Implement safety or security programs
- 3 C 53 Evaluate environmental impact of storage or distribution operations
- 4 C 56 Evaluate maintenance of workspace, equipment, or supplies
- 5 C 58 Evaluate procedures for storage, inventory, or inspection of property items
- 6 C 60 Evaluate suggestions
- 7 C 66 Investigate accidents or incidents
- 8 C 69 Write operating instructions (OIs)

0014 - TRAINING MONITOR

- 1 B 40 Supervise Apprentice Fuels Specialists (AFSC 63130)/Fuels Apprentices (AFSC 2F031)

- 2 D 76 Conduct OJT
- 3 D 79 Counsel trainees on training progress
- 4 D 80 Determine training requirements
- 5 D 89 Evaluate personnel for training needs
- 6 D 90 Evaluate progress of trainees
- 7 D 94 Maintain training records, charts, or graphs

0015 - SENIOR SUPERVISORS

- 1 A 1 Assign personnel to duty positions
- 2 A 3 Determine logistics requirements, such as space, personnel, equipment, or supplies
- 3 B 44 Supervise Fuels Supervisors (AFSC 63170)/Fuels Craftsmen (AFSC 2F071)
- 4 C 54 Evaluate individuals for promotion, demotion, reclassification, or special awards
- 5 C 55 Evaluate inspection report findings
- 6 C 65 Indorse enlisted performance reports (EPRs)

0016 - FIRST-LINE SUPERVISORS

- 1 A 11 Establish performance standards for subordinates
- 2 A 14 Establish work methods or controls
- 3 A 15 Plan or schedule work assignments
- 4 A 16 Plan work priorities
- 5 A 17 Schedule personnel for temporary duty (TDY), leaves, or passes
- 6 B 20 Conduct or participate in meetings, such as staff meetings, conferences, or workshops, other than training
- 7 B 21 Conduct supervisory orientations of newly assigned personnel
- 8 B 23 Counsel personnel on personal or military-related matters
- 9 B 38 Interpret policies, directives, or procedures for subordinates
- 10 B 42 Supervise Fuels Specialists (AFSC 63150)/Fuels Journeymen (AFSC 2F051)
- 11 C 46 Analyze workload requirements
- 12 C 48 Conduct performance feedback sessions
- 13 C 57 Evaluate personnel for compliance with performance standards
- 14 C 63 Evaluate work schedules

15 C 68 Write EPRs

0017 - FUELS CONTROL CENTER

- 1 I 231 Activate pyramid alert recall plans
- 2 I 232 Coordinate fuel requirements with maintenance job control
- 3 I 233 Coordinate sampling of fuels equipment with quality control and inspection (QCI)
- 4 I 234 Coordinate support services with appropriate agencies
- 5 I 235 Direct ground product fueling operations
- 6 I 236 Direct hydrant fueling operations
- 7 I 237 Direct mobile fueling operations
- 8 I 238 Direct utilization of fuels equipment
- 9 I 239 Dispatch fuel requests
- 10 I 240 Emboss aviation fuel identaplates
- 11 I 241 Input data into the Fuels Automated Management System (FAMS)
- 12 I 242 Inventory intrabase radios
- 13 I 243 Maintain alert recall rosters
- 14 I 244 Maintain facilities keys
- 15 I 245 Maintain intrabase radios
- 16 I 246 Maintain servicing clipboards for mobile fueling vehicles
- 17 I 247 Maintain status boards, charts or graphs
- 18 I 248 Monitor fuel servicing operations
- 19 I 249 Notify workcenters of weather warnings
- 20 I 250 Print automated forms and equipment status log sheets
- 21 I 251 Review aircraft flying schedules
- 22 I 252 Review flight schedules from maintenance control center (MCC)

0018 - LABORATORY

- 1 B 22 Coordinate petroleum or cryogenic shipments with traffic management office (TMO)
- 2 E 121 Perform American Petroleum Institute (API) specific gravity tests
- 3 J 253 Analyze aircraft fuel samples in accordance with particle assessment guide
- 4 J 254 Clean laboratory testing equipment
- 5 J 255 Convert and analyze hydrometer readings
- 6 J 256 Coordinate calibration of equipment or gauges with

- precision measurement equipment laboratory (PMEL)
- 7 J 257 Determine fuel system ice inhibitor (FSII) content
 - 8 J 258 Draw cryogenic samples
 - 9 J 259 Draw petroleum samples using bomb or weighted bottle
samplers
 - 10 J 260 Draw petroleum samples using Drum Thieves
 - 11 J 261 Draw petroleum samples using in-line samplers
 - 12 J 262 Establish or maintain crash kits
 - 13 J 263 Identify contaminated cryogenic products
 - 14 J 264 Identify contaminated petroleum products
 - 15 J 265 Identify reclaimable fuels
 - 16 J 266 Input test results to maintaining, preparing, and producing
executive reports (MAPPER) program
 - 17 J 267 Maintain laboratory analysis equipment
 - 18 J 268 Maintain laboratory sampling equipment
 - 19 J 269 Perform aeronautical engineering laboratory (AEL) water
tests
 - 20 J 270 Perform aircraft sump sample tests
 - 21 J 271 Perform cloud point tests on diesel fuel
 - 22 J 272 Perform conductivity tests
 - 23 J 273 Perform environmental fluid inhibitor tests
 - 24 J 274 Perform ethanol volume tests
 - 25 J 275 Perform fiber tests
 - 26 J 276 Perform flash point tests
 - 27 J 277 Perform heavy hydrocarbon tests
 - 28 J 278 Perform hydrometer readings during multiple product
receipts by pipeline
 - 29 J 279 Perform microscopic analyses of millipore filters
 - 30 J 280 Perform potential hydrogen (pH) tests for demineralized
water
 - 31 J 281 Perform solids tests for demineralized water
 - 32 J 282 Perform time filtrations
 - 33 J 283 Perform total solid sediment tests using bottle methods
 - 34 J 284 Perform total solid sediment tests using matched-weight
monitor
 - 35 J 285 Perform total solid sediment tests using single-filter
weight monitor
 - 36 J 286 Prepare laboratory samples for shipment
 - 37 J 287 Prepare laboratory samples for testing
 - 38 J 288 Produce data using fuels automated sample tracking (FAST)
program

0019 - CRYOGENICS

- 1 L 303 Adjust pressure relief valves
- 2 L 304 Clean pressure and quantity gauges for cryogenic products
- 3 L 305 Dispose of contaminated cryogenic products
- 4 L 306 Fill cylinders with oxygen or nitrogen
- 5 L 307 Ground cryotainers
- 6 L 308 Inventory cryogenic products or equipment
- 7 L 309 Issue, receive, or transfer cryogenic products
- 8 L 310 Maintain cryogenic safety equipment
- 9 L 311 Maintain cryogenic storage areas
- 10 L 312 Maintain cryogenic support equipment
- 11 L 313 Maintain cryotainers
- 12 L 314 Monitor pressure on cryogenic production plants
- 13 L 315 Obtain vacuum readings
- 14 L 316 Perform cryogenic plant defrost operations
- 15 L 317 Perform emergency shutdown procedures on cryogenic plants
- 16 L 318 Perform odor or particulate tests on liquid oxygen (LOX)
cryotainers
- 17 L 319 Perform operator maintenance on cryogenic production plants
- 18 L 320 Perform purity tests on cryogenic products
- 19 L 321 Perform recurring inspections of cryotainers
- 20 L 322 Perform recurring inspections on cryogenic production
plants
- 21 L 323 Place cryotainers in storage
- 22 L 324 Place gas cylinders in storage
- 23 L 325 Prepare cryotainers for shipment
- 24 L 326 Produce LOX or liquid nitrogen (LIN)
- 25 L 327 Produce oxygen or nitrogen gas
- 26 L 328 Pull a vacuum
- 27 L 329 Purge cryotainers
- 28 L 330 Record and maintain historical data on cryogenic production
plants
- 29 L 331 Remove cryotainers from storage
- 30 L 332 Verify AFTO Forms 244 (Industrial/Support Equipment Record)
for Red X items

0020 - BULK STORAGE

- 1 F 125 Coordinate bulk storage or service station maintenance with
base civil engineers (BCEs)
- 2 F 126 Coordinate fuel transfers with fuels control center (FCC)
and appropriate agencies
- 3 F 127 Drain water from bulk storage tanks

- 4 F 128 Gauge bulk storage tanks for fuel quantity or temperature
- 5 F 129 Gauge fuel shipments for water
- 6 F 130 Ground or bond receipt vessels or conveyances, such as
ocean tankers, barges, railway tank cars, or tank trucks
- 7 F 131 Isolate contaminated petroleum products found in bulk
storage tanks
- 8 F 133 Maintain lateral control pits or outlets
- 9 F 134 Maintain service station facilities
- 10 F 135 Operate automated service station to issue, receive, store,
or transfer fuel
- 11 F 136 Operate bulk storage product recovery systems
- 12 F 137 Operate bulk storage systems to issue, receive, store, or
transfer fuel
- 13 F 138 Perform emergency shutdown procedures on service station
facilities
- 14 F 139 Perform emergency shutdown procedures on storage facilities
- 15 F 141 Perform operator maintenance on bulk storage facilities
- 16 F 142 Perform recurring inspections of bulk storage facilities
- 17 F 143 Perform return-to-bulk operations using fuel bowser

0021 - SAFETY INSPECTIONS

- 1 E 104 Apply reflective tape to equipment
- 2 E 106 Clean protective clothing or equipment
- 3 E 108 Dispose of hazardous waste materials
- 4 E 109 Fill portable emergency eyewashers
- 5 E 110 Inspect condition and cleanliness of protective clothing
- 6 E 112 Inspect emergency showers
- 7 E 113 Inspect hazardous waste accumulation points
- 8 E 114 Inspect markings or decals on waste containers
- 9 E 115 Inspect permanently-installed emergency eyewashers
- 10 E 116 Inspect portable emergency eyewashers
- 11 E 119 Maintain hazardous waste spill kits
- 12 E 120 Maintain personal safety equipment
- 13 E 122 Store hazardous waste materials

0022 - HYDRANTS

- 1 G 144 Coordinate hydrant facility maintenance with BCEs
- 2 G 146 Drain water from hydrant systems
- 3 G 148 Flush hydrant systems

- 4 G 149 Inspect hose carts (H/Cs)
- 5 G 150 Inspect hydrant systems
- 6 G 154 Isolate contaminated petroleum products found in hydrant systems
- 7 G 157 Operate hydrant systems to issue, defuel, store, transfer or receive petroleum products
- 8 G 161 Perform emergency shutdown procedures on hydrants
- 9 G 169 Perform operator maintenance on H/Cs
- 10 G 170 Perform operator maintenance on hydrant systems

0023 - MOBILE DISTRIBUTION OPERATIONS

- 1 E 117 Investigate fuel gains or losses
- 2 E 124 Visually inspect fuel samples for water, color, or contaminants
- 3 F 140 Perform issue-from-bulk or return-to-bulk operations using mobile refueling vehicles
- 4 G 147 Drain water from tank trucks or semitrailers
- 5 G 151 Inspect mobile fuels distribution vehicles
- 6 G 156 Issue demineralized water
- 7 G 158 Perform cold integrated combat turnaround (ICT) servicing operations
- 8 G 159 Perform concurrent servicing operations
- 9 G 160 Perform emergency shutdown procedures on fuels distribution vehicles
- 10 G 163 Perform hot defueling servicing operations
- 11 G 167 Perform multisource refueling servicing operations
- 12 G 168 Perform normal flightline refueling or defueling servicing operations
- 13 G 171 Perform operator maintenance on mobile fuels distribution vehicles

0024 Tasks not referenced

- 1 B 24 Destroy classified material
- 2 B 27 Direct maintenance of status boards, charts, or graphs
- 3 B 29 Direct maintenance of workspace, equipment, or supplies
- 4 B 37 Initiate certificates for destruction of classified material
- 5 B 39 Maintain classified material
- 6 B 41 Supervise civilian personnel

- 7 B 43 Supervise Fuels Superintendents (AFSC 63190)/(AFSC 2F091)
- 8 B 45 Supervise military personnel with AFSCs other than 631X0/(AFSC 2F0X1)
- 9 C 47 Complete USAF Graduate Evaluation Program forms or questionnaires
- 10 C 64 Indorse civilian performance ratings or supervisory appraisals
- 11 C 67 Write civilian performance ratings or supervisory appraisals
- 12 C 70 Write proficiency evaluation guides
- 13 D 74 Assign resident course instructors
- 14 D 82 Develop resident course or career development course (CDC) curriculum materials
- 15 D 83 Develop specialty training standards (STSs)
- 16 D 101 Write job qualification standards (JQSs)
- 17 E 105 Change respirator filters, other than air-supplied system filters
- 18 E 107 Coordinate disposal of contaminated petroleum products with defense reutilization marketing office (DRMO)
- 19 E 111 Inspect condition of harnesses
- 20 E 118 Maintain hazardous waste documentation records or log books
- 21 E 123 Transport hazardous waste materials
- 22 F 132 Maintain drummed fuel storage
- 23 G 145 Coordinate mobile refueling vehicle maintenance with base refueling maintenance
- 24 G 152 Inspect pantographs
- 25 G 153 Inspect portable issue trailers
- 26 G 155 Isolate contaminated petroleum products found in mobile refueling vehicles
- 27 G 162 Perform hardened shelter refueling servicing operations
- 28 G 164 Perform hot ICT servicing operations
- 29 G 165 Perform hot refueling servicing operations
- 30 G 166 Perform multi-aircraft refueling servicing operations
- 31 G 172 Perform operator maintenance on pantographs
- 32 G 173 Perform operator maintenance on portable issue trailers
- 33 G 174 Perform TAB VEE shelter refueling servicing operations
- 34 G 175 Tow portable issue trailers
- 35 H 177 Audit combat fuels management system reports (D33s)
- 36 H 178 Audit daily fuels document register reports (D04s)
- 37 H 179 Audit daily fuels management data reports (D05s)
- 38 H 180 Audit daily fuels reject listings (D02s)
- 39 H 181 Audit daily fuels transaction registers (D06s)
- 40 H 182 Audit monthly fuels management data reports (M34s)
- 41 H 183 Audit monthly fuels sales analysis reports (M27s)
- 42 H 184 Compile and report ground fuel consumption to AFO

- 43 H 185 Complete or update source identification ordering authorization (SIOATH) status reports
- 44 H 186 Complete reporting emergency petroleum, oils, and lubricants (REPOL) reports
- 45 H 187 Coordinate fuel accounting matters with accounting and finance office (AFO)
- 46 H 188 Coordinate fuel contracts with base contracting office
- 47 H 189 Coordinate REPOL reports with other internal sections
- 48 H 190 Coordinate requisitioning of petroleum products with base contracting office
- 49 H 192 Emboss equipment station plates or ground fuel servoplates
- 50 H 193 Encode vehicle identification links
- 51 H 194 Generate management reports
- 52 H 195 Maintain document control files
- 53 H 199 Monitor computer rejects, management notices, or delinquent document suspenses
- 54 H 200 Monitor on-order or in-transit inventories
- 55 H 201 Monitor pre-positioned war reserve materiel stock (PWRMS) levels
- 56 H 204 Process in-flight refueling issue documents
- 57 H 206 Process issues for cryogenic products
- 58 H 209 Process non-DOD aircraft cash sales
- 59 H 211 Process receipts for cryogenic products
- 60 H 215 Process requisitions for cryogenic products
- 61 H 220 Process transfers for aviation products
- 62 H 221 Process transfers for cryogenic products
- 63 H 222 Process transfers for ground products
- 64 M 345 Participate in mobility exercise processing
- 65 M 351 Type or draft materiel deficiency reports

THIS PAGE INTENTIONALLY LEFT BLANK