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SAFETY CAREER LADDER, AFSCS 24130, 24150, 24170, AND 24190.(U)
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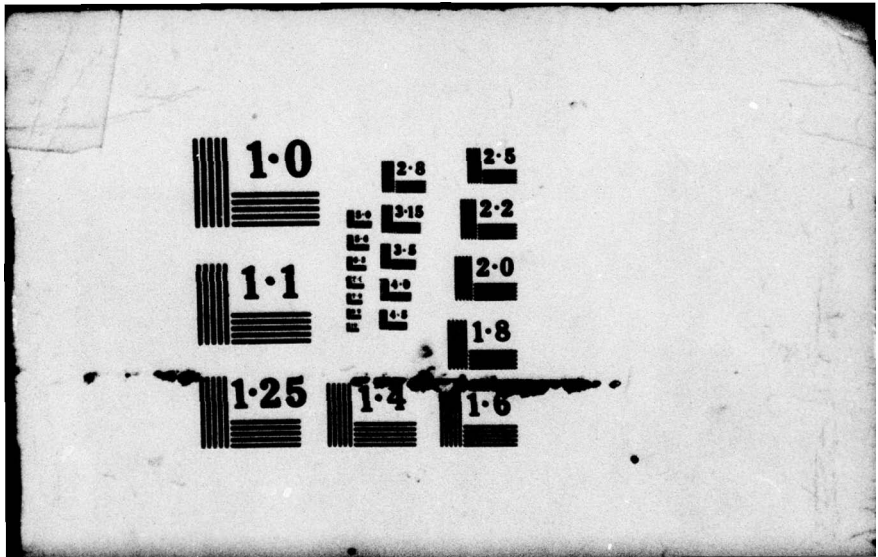
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OCCUPATIONAL SURVEY REPORT

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⑥ SAFETY CAREER LADDER
AFSCs 24130, 24150, 24170, AND 24190

⑫ 53p.

AFPT 90-241-099

⑪ JUL 1979

OCCUPATIONAL SURVEY BRANCH
USAF OCCUPATIONAL MEASUREMENT CENTER ✓
RANDOLPH AFB TEXAS 78148

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PREFACE

↓ This report presents the results of a detailed Air Force Occupational Survey of the Safety Specialty (AFSC 241X0). The project was directed by USAF Program Technical Training, Volume 2, dated June 1978. Authority for conducting occupational surveys is contained in AFR 35-2. Computer outputs from which this report was produced are available for use by operating and training officials. ←

The occupational survey program within the Air Force has been in existence since 1956 when initial research was undertaken by the Air Force Human Resources Laboratory to develop the methodology for conducting occupational surveys. In 1967, an operational survey program was established within Air Training Command and surveys were produced annually on 12 enlisted specialties. In 1972, the program was expanded to annually produce occupational surveys of 51 career ladders.

The survey instrument was developed by 1st Lt Rita Snyder, Inventory Development Specialist. Mr. Guy Cole analyzed the survey data and wrote the final report. This report has been reviewed and approved by Lt Col Jimmy L. Mitchell, Chief, Airman Career Ladders Analysis Section, Occupational Survey Branch, USAF Occupational Measurement Center, Randolph AFB, Texas 78148.

Computer programs for analyzing the occupational data were designed by Dr. Raymond E. Christal, Occupational and Manpower Research Division, Air Force Human Resources Laboratory (AFHRL), and were written by the Project Analysis and Programming Branch, Computational Sciences Division, AFHRL.

Copies of this report are available to air staff sections, major commands, and other interested training and management personnel upon request to the USAF Occupational Measurement Center, attention of the Chief, Occupational Survey Branch (OMY), Randolph AFB, Texas 78148.

This report has been reviewed and is approved.

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SUMMARY OF RESULTS

1. SURVEY COVERAGE: Inventory booklets were administered to personnel in the Safety specialty during the period November 1978 through February 1979. Survey results are based on responses from 422 individuals or 77 percent of those assigned to DAFSC 241X0 positions.
2. SPECIALTY STRUCTURE: Personnel in the Safety career ladder conduct, supervise, and advise on the various Air Force safety programs. Since basic safety rules and concepts are universally applicable, the career ladder should be quite homogeneous. However, an analysis of the specialty structure revealed eight different types of jobs being performed by career ladders incumbents. Although some jobs identified were a result of assigning personnel to certain functions (e.g., multi-media training and mishap investigation reports), the type of organization (base, unit, missile wing, etc.) in which safety personnel worked was a primary factor in job grouping.
3. SPECIALTY PROGRESSION: Except for a general increase in managerial and overall program guidance functions at the 7-skill level, there was little difference between 5- and 7-skill level personnel. Even at the 9-skill level, personnel still performed many technical safety functions. Slightly over half of these individuals supervised subordinate safety technicians. Many of the other 9-skill level personnel were assigned to specialized functions such as major command safety program monitors or advisors.
4. SPECIALTY DOCUMENTS: The AFR 39-1 specialty descriptions provide a comprehensive overview of the jobs performed by personnel at the various skill levels.
5. COMPARISON TO PREVIOUS SURVEYS: Although the shreds for traffic and missile safety have been deleted since the 1973 survey, the current survey identified job groups which were primarily concerned with these functions. Additionally, as in the 1973 survey, the largest percentage of Safety Personnel were found in jobs encompassing the broad scope of ground safety or general safety. Only a small number of jobs involving primarily management and supervision of the ground safety program were found in both surveys. However, these groups proved to be small (less than 10 percent of the sample) and a return to shreddouts does not appear warranted.
6. DIRECT ENTRY INTO THE CAREER FIELD: Since 1976, airmen have entered the Safety career field directly from basic training. Although some concern was expressed by senior NCOs, there appeared to be little difference in technical tasks performed by First Term airmen versus cross trainees having the same amount of time in the career field. Cross trainees did report performing more supervisory and management tasks but this appears to be a function of their higher military grade.

OCCUPATIONAL SURVEY REPORT
SAFETY CAREER LADDER
(AFSCs 24130, 24150, 24170, AND 24190)

INTRODUCTION

Since the beginning of World War II, safety programs within the armed services have been given ever increasing emphasis. This is especially true in the Air Force where the level of technology dictates a viable safety program to insure the conservation of expensive resources including highly trained personnel and complex equipment essential to mission accomplishment.

This survey was initiated in response to a request from the 3460th Technical Training Group at Lowry AFB, for use in evaluating training being provided in the safety career ladder. During the inventory development and administration phases of the survey, interest was expressed relative to the career field structure, job satisfaction, and other information pertinent to the management of the career ladder.

Although the functions of the safety career ladder have remained essentially the same since its establishment within the Air Force Specialty system in 1951, there have been several changes in career field structure over the years. Prior to 1976, the safety career field was divided into three shreds; Safety Specialist/Technician (241X0), covering jobs in general safety areas; Safety Specialist/Technician-Traffic Safety Assistant (241X0A); and Safety Specialist/Technician-Missile (241X0B). In 1976, the "A" and "B" shreds were deleted and all personnel were converted to the one ladder-AFS 241X0.

In addition to the shreds, personnel entering the safety career ladder prior to 1976 were accepted only after achieving a 5-skill level in another career ladder. With the change in 1976, however, inputs to the safety career ladder were accepted from basic trainees who, after attending the basic safety course, were assigned directly to the field as Safety Specialists. Some concern has been expressed as to whether these lower grade airmen are being fully utilized in the field or are being relegated to performing menial tasks. This is one specific area that is addressed in this report.

In addition, normal analysis of the occupational data has been accomplished which includes: (1) an analysis of the job structure of the career ladder based on tasks performed and time spent on these tasks; and (2) analysis of tasks performed and job satisfaction by skill level and time in military service (TAFMS) groups. The AFR 39-1 Specialty Descriptions have also been evaluated in terms of the tasks performed by both time in service and Duty AFSC groups.

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It should be noted that there are an infinite number of questions that may be addressed through further analysis of the task data collected in this inventory. This report has been confined to those areas that pertain to the total career field population and its utilization in accomplishing the Air Force safety program. Additional specialized studies may be performed to analyze specified groups of individuals. These specialized studies might include looking at tasks performed by 5-skill level airmen working within a specific command, tasks performed by E-7s who supervise no subordinates, or other similar analyses of tasks performed by groups that can be identified by one or more background items. Such analysis will be accomplished upon written request to the Occupational Survey Branch (OMY) with adequate justification specifying the need for and use of such information.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-241-099. As a starting point, the task list from the 1973 inventory was reviewed and revised through a comprehensive research of publications and directives and through interviews with four subject matter specialists at the technical training school at Lowry and three subject matter specialists at Randolph Air Force Base. This process resulted in a final inventory consisting of 431 tasks grouped under 13 duty headings and a background section that included questions about the respondents grade, Total Active Federal Military Service (TAFMS), time in career field, duty title, and job interest.

Survey Administration

During the period November 1978 through February 1979, consolidated base personnel offices in operational units worldwide administered the inventory to job incumbents holding DAFSC 241X0. These job incumbents were selected from a computer generated mailing list obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL).

Each individual who completed the inventory first completed an identification and biographical information section (background section), and then checked each task performed in their current job. After checking all tasks performed, each incumbent then rated each of these tasks on a nine-point scale showing relative time spent on that task as compared to all other tasks checked. The ratings ranged from one (very-small-amount time spent) through five (about-average time spent) to nine (very-large-amount time spent).

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

In addition to completing the job inventory, selected senior personnel were asked to also complete a task difficulty booklet. In this booklet, respondents were asked to rate each of the tasks on a nine-point scale, from extremely low to extremely high based upon the difficulty of the task as compared to the other tasks in the inventory. Difficulty was defined as the length of time required by an average individual in the career ladder to learn to perform the task proficiently.

Although the instructions for survey administration erroneously excluded 9-skill level personnel who did not supervise 241X0 personnel, review of the returns indicates that many of those individuals did complete and return booklets. In fact, over one third of the 57 9-skill level respondents indicated that they did not directly supervise 241X0 personnel. Although the data for 9-skill levels appears to be representative of duty and task performance by superintendents in this ladder, the error in the administration instructions may have induced a slight bias in the data for this skill level. Users of the data should be aware of this fact when reviewing the 9-skill level data.

Survey Sample

In view of the limited number of personnel in this career ladder (549 assigned as of December 1978), survey booklets were sent to servicing CBPOs for each incumbent in the ladder. Useable inventories were received from 422 airmen or 77 percent of those assigned. Table 1 shows the distribution by command of personnel assigned and by respondents to the survey. Table 2 reflects the DAFSC distribution by total assigned and by survey returns.

Tables 3 and 4 show distributions of the survey respondents by months in service and months in the safety career field. These tables emphasize the fact that this career ladder is staffed by personnel with a considerable amount of military experience, with 85 percent having over eight years military experience and 58 percent having over four years experience in safety. These data generally show that the survey sample is representative of all MAJCOMs and of all DAFSC groups except the 3-skill level. Since only two responses were received from DAFSC 24130 personnel, no definitive information can be provided for this skill level.

TABLE 1
COMMAND REPRESENTATION OF SURVEY SAMPLE

<u>COMMAND</u>	<u>PERCENT OF TOTAL ASSIGNED</u>	<u>PERCENT OF TOTAL SAMPLE</u>
SAC	20	23
TAC	17	16
ATC	13	10
USAFE	11	12
AFSC	9	9
MAC	9	10
AFCS	7	9
PACAF	6	4
ADC	3	3
AAC	2	3
OTHER	<u>3</u>	<u>1</u>
	100%	100%
TOTAL ASSIGNED - 549		
TOTAL SAMPLED - 422		
PERCENT SAMPLED - 77%		

TABLE 2
DAFSC DISTRIBUTION OF SURVEY SAMPLE

<u>DAFSC</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
24130	4	*
24150	28	27
24170	52	59
24190	<u>16</u>	<u>14</u>
	100%	100%

* LESS THAN 1%

TABLE 3

DISTRIBUTION OF SURVEY SAMPLE BY TOTAL ACTIVE FEDERAL
MILITARY SERVICE (TAFMS)

<u>MONTHS IN SERVICE</u>	<u>NUMBER IN SAMPLE</u>	<u>PERCENT OF SAMPLE</u>
1-48	24	6%
49-96	40	9%
97-144	74	18%
145-192	90	21%
193-240	140	33%
241+	<u>54</u>	<u>13%</u>
	422	100%

TABLE 4

DISTRIBUTION OF SURVEY SAMPLE BY TIME IN SAFETY CAREER FIELD

<u>MONTHS IN SAFETY CAREER FIELD</u>	<u>NUMBER IN SAMPLE</u>	<u>PERCENT OF SAMPLE</u>
1-48	178	42%
49-96	133	32%
97+	<u>111</u>	<u>26%</u>
	422	100%

SPECIALTY STRUCTURE

A key aspect of the occupational survey program is to examine the job structure of career ladders in terms of what people are actually doing in the field, rather than on the basis of how official career ladder documents say they are structured. This analysis of actual job structure is made possible by the Comprehensive Occupational Data Analysis Programs (CODAP). By using CODAP, job functions are identified on the basis of similarity in tasks performed and relative time spent performing the tasks.

The specialty structure analysis process consists of determining the functional job structure of career field personnel in terms of job types, clusters, and independent job types. A job type is a group of individuals who perform many of the same tasks and also spend similar amounts of time performing them. When there is a substantial degree of similarity between different job types, they are grouped together and labeled as clusters. Finally, there are often cases of specialized job types that are too dissimilar to be grouped into any cluster. These unique groups are labeled independent job types.

Specialty Structure Overview

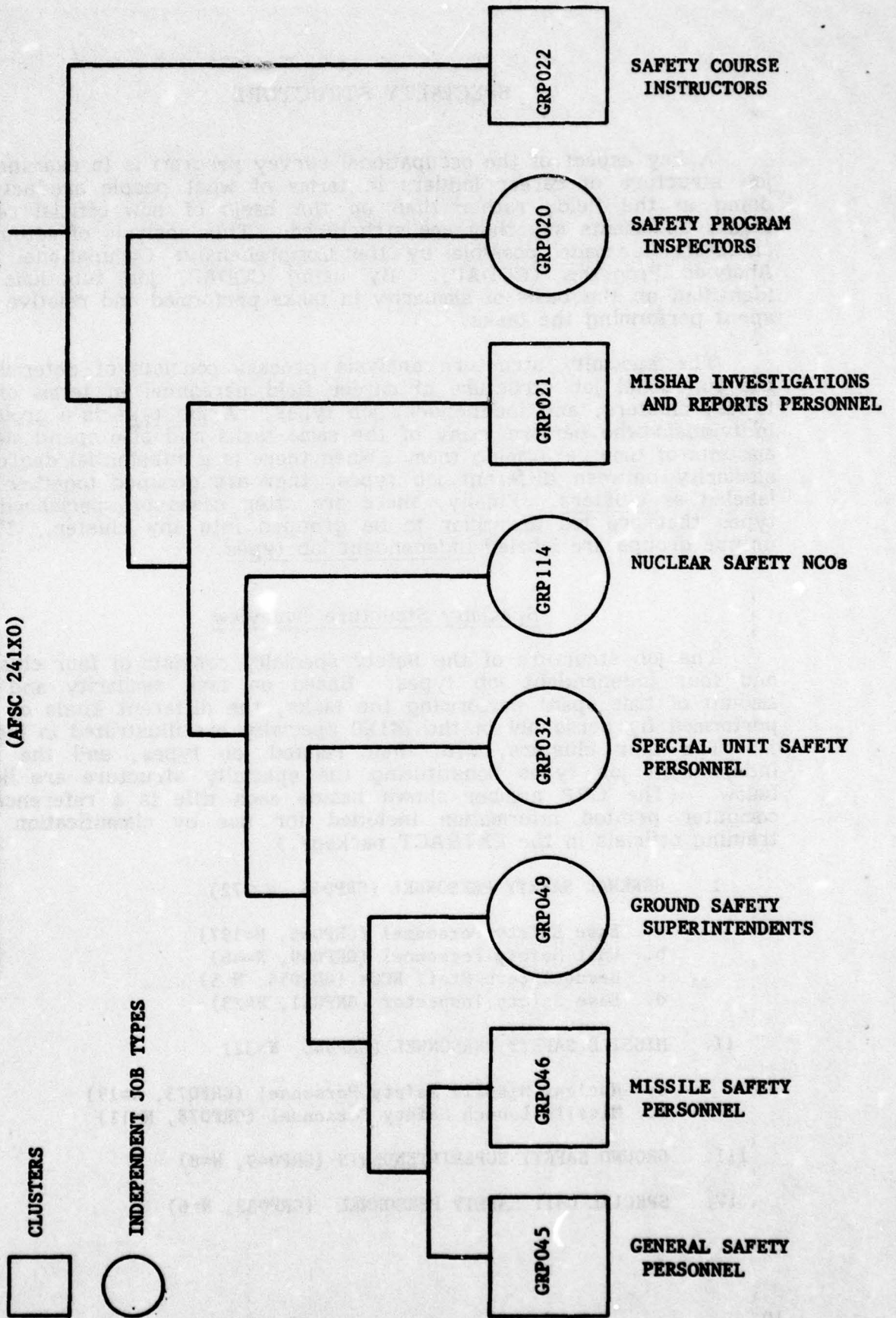
The job structure of the Safety specialty consists of four clusters and four independent job types. Based on task similarity and the amount of time spent performing the tasks, the different kinds of jobs performed by personnel in the 241X0 specialty are illustrated in Figure 1. The four clusters, with their related job types, and the four independent job types constituting the specialty structure are listed below. (The GRP number shown beside each title is a reference to computer printed information included for use by classification and training officials in the EXTRACT package.)

- I. GENERAL SAFETY PERSONNEL (GRP045, N=272)
 - a. Base Safety Personnel (GRP065, N=197)
 - b. Unit Safety Personnel (GRP069, N=46)
 - c. Headquarters Staff NCOs (GRP054, N=5)
 - d. Base Safety Inspector (GRP051, N=23)
- II. MISSILE SAFETY PERSONNEL (GRP046, N=32)
 - a. Nuclear Missile Safety Personnel (GRP073, N=19)
 - b. Missile Launch Safety Personnel (GRP078, N=11)
- III. GROUND SAFETY SUPERINTENDENTS (GRP049, N=8)
- IV. SPECIAL UNIT SAFETY PERSONNEL (GRP032, N=6)

FIGURE 1

CAREER LADDER STRUCTURE FOR THE SAFETY CAREER LADDER
(AFSC 241X0)

TOTAL SAMPLE
(N=422)



- V. NUCLEAR SAFETY NCOs (GRP114, N=8)
- VI. MISHAP INVESTIGATIONS AND REPORTS PERSONNEL (GRP021, N=27)
 - a. Mishap Investigations Personnel (GRP033, N=13)
 - b. Safety Reports NCOs (GRP025, N=14)
- VII. SAFETY PROGRAM INSPECTORS (GRP020, N=13)
- VIII. SAFETY COURSE INSTRUCTORS (GRP022, N=34)
 - a. Multi-media Instructor-Safety Specialists (GRP074, N=10)
 - b. Multi-media Instructors (GRP080, N=17)

Ninety-five percent of the respondents in the survey sample performed jobs identified above. The remaining five percent performed specialized jobs that were so heterogeneous that they did not group with any of the above clusters or job types. Examples of the kinds of jobs not included in the above clusters were a CDC writer, the Technical editor of Driver magazine, two Technical School instructors, and several Headquarters staff personnel.

Group Descriptions

Brief descriptions of the major groups of jobs performed by personnel within the Safety Specialty are given below. Tables 5 and 6 reflect selected background information on each of these groups.

I. General Safety Personnel (GRP045). This cluster of jobs included 272 airmen, or 64 percent of the survey respondents. The large number in this cluster reflects the relative homogeneity of tasks performed by safety personnel within the normal ground safety programs of the Air Force. Although there were essentially four different job type groups within this cluster, 85 tasks were common to 75 percent or more of these personnel and accounted for over 45 percent of the average work time of this group. The average number of tasks performed by members of this cluster was 182, reflecting a high degree of involvement with a variety of safety functions. Although 72 percent of these personnel were 7- or 9-skill level personnel, only 24 percent supervised one or more subordinates. This highlights the fact that technical tasks are a primary part of safety technicians and superintendents job. For example, only 20 percent of the average percent time spent by members of this group was devoted to performing tasks within the duties of organizing and planning, directing and implementing, inspecting and evaluating and training. Approximately 64 percent of the time was spent on tasks in the duties of performing general safety inspections; performing mishap investigations; and maintaining forms, records, and reports. Personnel in this large cluster appear to be well satisfied with their jobs, with over 85 percent reporting that their job was interesting and utilized their talents and training fairly well or better (see Table 6).

The four job types identified within this cluster reflect some of the typical divisions of ground safety functions into specialized jobs, primarily on the basis of the type of organization to which an individual is assigned. For example, within this cluster were a group of 197 personnel working primarily within base safety organizations. They were responsible for inspecting service and recreational facilities such as base child care centers, bowling alleys, gymnasiums, commissary areas, recreation centers, club facilities, hospital facilities, high-pressure gas storage areas, firing ranges, etc. This group included supervisors and NCOICs of these functions as well as specialists who are engaged almost exclusively in non supervisory tasks.

Another group within this cluster has been identified as Unit Safety Personnel and includes NCOICs and specialists working in tenant units (e.g., communication groups; recruiting groups) or in specialized units such as weapons laboratories, civil engineering groups, Headquarters groups, etc. These individuals perform essentially the same functions as those in the Base Safety Personnel group with the exception of inspecting service and recreational facilities.

The third job type group within this cluster contains five senior personnel who advise on, manage, and/or supervise safety programs. Three of these individuals are chiefs of safety at MAJCOM levels. Another is chief of safety for the Pentagon while the fifth member serves as DOD safety advisor. As would be expected, these personnel average higher in education level and career field experience than any other group identified by the grouping analysis. Approximately half of the average time of this group is spent on management and supervisory functions involving such tasks as: interpreting policies, directives, or procedures; evaluating and implementing safety programs; advising commanders on safety related topics; and implementing hazard reporting systems, suggestion programs, mishap notification procedures, etc. The rest of the group members' time is devoted to performing tasks within technical duties such as distributing mishap briefs or safety bulletins, coordinating with staff agencies on management safety effectiveness, approving or disapproving requests for deviation from established safety procedures, etc. All of the incumbents of this group report that their job is interesting and that their talents and training are used quite well or better.

The fourth job type group in this cluster includes 23 airmen typically working within base or wing safety organizations with a full scope of safety programs as described in the first job type group above. This group is very similar to the first group except that these personnel spend over 60 percent of their work time performing safety inspections, while personnel in the first group spend only 40 percent of their work time on this function.

II. Missile Safety Personnel (GRP046). This group of 32 individuals perform safety functions primarily within strategic missile or bomb wings, or at the Space and Missile Testing Center. The safety program in which these individuals work is heavily oriented to the

maintenance, storage, and handling of missiles. Although many tasks performed are common to all safety jobs, these personnel also perform a large number which relate directly to missile safety. These include such tasks as inspecting missile maintenance or support facilities, monitoring hazardous operations, inspecting sites or facilities for handling or storage of hazardous materials, providing safety staff supervision during hazardous operations, evaluating procedures for uploading, downloading or payload exchange of missile or weapon systems, and monitoring missile safety training.

Within this cluster were two types of jobs. The first included 19 personnel who were working in organizations handling nuclear weapons. Tasks which were unique to this group were from the duty, "Managing nuclear surety programs" and included inspection of sites or facilities for adherence to the two-man concept, monitoring compliance with nuclear weapons system safety rules, and maintaining nuclear convoy procedures. The members of this job type were located primarily within strategic missile wings, with a few personnel working in bomb wings.

The second job type group in this cluster was composed of 11 personnel who worked primarily within the AFSC Space and Missile Test Center. Tasks performed by this group were very similar to the preceding group except that few of these personnel performed tasks relating to nuclear safety. Personnel in this group also had an average of 28 months less experience in the career field than members of the nuclear group.

III. Ground Safety Superintendents (GRP049). This small independent job type group includes eight individuals. Six of these were assigned to 9-skill level Ground Safety Superintendent jobs while two worked in 7-skill level positions as NCOICs of Ground Safety functions. Except for one individual serving as Executive Assistant/Technical Advisor at a headquarters level, all directly supervised subordinate personnel. Typically these personnel spent over 50 percent of their work time on tasks directly associated with directing and implementing, organizing and planning, inspecting and evaluating, and training. Compared with other superintendents and supervisory positions identified in other clusters and job types, these individuals spent a great deal more time on these functions than other 7- and 9-skill level personnel. In addition, tasks such as reviewing inspection schedules and follow-up actions, participating as a member or advisor on ground safety councils, attending combined safety council meetings, coordinating with security police on mishaps, traffic records, or surveys, and analyzing initial mishap findings to determine causative factors are typical supervisory type tasks although they are included in the technical duties. Although a few of these personnel performed some of the more routine technical safety tasks, these few positions appear to be oriented more toward the traditional management and supervision assignment for 7- and 9-skill level personnel than the majority of technicians and superintendents working within the safety career ladder.

IV. Special Unit Safety Personnel (GRP032). This small group (N=6) of Safety Personnel worked in small organizations with limited or unique safety programs. Generally the group was rather heterogeneous in that only 24 tasks were performed by 80 percent or more of the group members. These tasks included preparing safety inspection reports, analyzing initial mishap findings to determine reportability or to determine causative factors, reviewing hospital admission or disposition logs, inspecting sites or facilities for posting of accident prevention signs, inspecting administrative areas, and distributing mishap briefs or safety bulletins. Typically this group performed an average of only 73 tasks, considerably less than most groups. This may be related to the fact that most of these individuals have less than a year's experience at their present base and are therefore somewhat restricted in terms of the scope of their assignment. Half of these personnel found their jobs dull and felt that their talents were used very little or not at all. Based on the type of tasks performed and the interest in their jobs demonstrated by these personnel, it would appear that safety programs in which these individuals work are either very restrictive in nature or that the individuals themselves are assigned only the more routine safety functions.

V. Nuclear Safety NCOs (GRP114). This group included eight personnel who devoted a relatively large portion of their work time to managing nuclear surety programs. Although many of this group worked in the same organizations as those in the Nuclear Missile Safety Personnel group described in II above, individuals in this group were more specialized in tasks directly associated with the nuclear surety program than those of the preceding group. For example, personnel in this group averaged performing only 111 tasks compared to an average of 181 tasks performed by members of the missile group described above. However, these personnel spent approximately three times as much of their overall work time in accomplishing nuclear surety program tasks than those of the previously referenced group. In fact, almost all tasks performed by this group were directly related to the nuclear surety program while members of the preceding missile safety job group had a somewhat broader safety program, including other areas of safety in addition to nuclear safety. Examples of tasks performed by all members of this group included: inspect sites or facilities for adherence to the two-man concept, monitor security of nuclear weapons, investigate nuclear aids, monitor compliance with nuclear equipment certification and with nuclear weapon system safety rules, monitor nuclear convoy routes, serve as a member of nuclear safety councils, and maintain safety inspection reports. In addition, this group performs a number of collateral safety tasks such as prepare mishap briefs or safety bulletins, develop or publish safety education materials, attend combined safety council meetings, and serve as advisor to commander on safety related topics. Personnel in this group averaged somewhat lower in grade level and career field experience than members of the nuclear missile safety group described in II above, possibly accounting for the more specialized and narrower assignment for this small group of individuals.

* VI. Mishap Investigations and Reports Personnel (GRP021). The 27 members of this cluster are primarily concerned with the investigation and reporting of mishaps. Two kinds of jobs were identified. One contained 13 individuals who devoted a large portion of their work time to tasks relating to the investigation of mishaps and performing general safety inspections. Typical tasks performed by this group included interviewing witnesses and obtaining background information about witnesses or injured persons; preparing formal preliminary or progress reports; reviewing hospital records or logs; recording mishaps including type or mechanical condition of vehicles or equipment; and inspecting administrative areas, shops, or various facilities. The other job, comprised of 14 personnel, was primarily involved in the preparation and maintenance of AF safety forms and records and in compiling various reports and summaries relative to mishap rates, costs, etc. In addition, personnel in this group maintain nominations for National Safety Council awards forms; approve or disapprove requests for deviations from established safety procedures; plan or prepare briefings; prepare or review safety awards; participate in staff meetings; develop safety checklists; and develop or publish safety education materials. These tasks are performed by few of the members of the preceding job type group. Although Mishap Investigation personnel perform an average of approximately 25 more tasks than the Safety Reports personnel, their job is less difficult. This is logical since Safety Reports personnel average slightly higher in experience and grade level than those in the mishap investigation job.

VII. Safety Program Inspector (GRP020). This small group of personnel are from a variety of functions and are primarily engaged in conducting safety inspections. Approximately one-fourth of these individuals work in relatively small activities and perform inspections relative to missile safety. The remainder work in major commands and serve as MAJCOM Inspectors or in specialized headquarters functions where safety inspections are limited in scope. Typical tasks performed by this group are very heterogeneous, as would be expected from the variety of organizations represented by individuals in this group. Tasks which are common to the majority of these individuals are general inspection tasks such as inspect sites or facilities for electrical hazards, utilization of personnel, protective equipment or clothing, operational status of emergency lighting systems, etc. These general inspection tasks account for over 55 percent of the work time of this group. This is the predominant characteristic which draws this otherwise diverse group of individuals together. Another significant characteristic of this group is that the average number of tasks performed (63) is considerably smaller than that of other groups identified. Almost half of these individuals felt that their job was dull or only so-so. This was considerably below job interest expressed by other job groups within this ladder.

VIII. Safety Course Instructors (GRP022). This cluster includes individuals who, for the major part of their work time, were engaged in conducting multi-media training in safety. These personnel were divided into two groups, one who devoted almost all of their time to

tasks directly associated with the training function and one group, who, although a major part of their job was training, also performed other safety inspection and records keeping functions. Over 90 percent of the personnel from this group performed such tasks as operate multi-media teaching systems; and conduct Local Condition Traffic Safety Courses (Course II), Supervisor Safety Courses (Course VIII), Standard Traffic Safety Courses (Course I), Advanced Traffic Techniques Courses (Course IV), and Government Motor Vehicle (GMV) Operator Courses (Course VI). Over 50 percent of the members of this group were 5-skill level, a considerably higher percentage of 5-skill level personnel than any of the other job types identified. Also personnel in this group averaged slightly less time in service than other groups, indicating a general trend toward assignment of the less experienced personnel to instructor functions. Even so, over three-fourths of these personnel felt that their job was interesting and over 80 percent indicated that their talents and training were used fairly well or better.

Summary

The most significant factor in the grouping of safety jobs was the scope of the safety program in which the individual worked. Almost half of the survey respondents worked in base level safety programs and performed a relatively large number of tasks involving a variety of safety functions common to base level programs. Individuals assigned to tenant units performed considerably fewer tasks since the unit program did not include the inspection of service or recreation facilities common to base programs. Other groups were identified based on functions performed such as safety inspectors, mishap investigations and reports personnel, and safety course instructors. The missile safety personnel cluster and nuclear safety NCOs job type were differentiated on the basis of the unique missile and nuclear safety functions performed by these personnel.

Generally supervisors performed a large number of the technical tasks common to their subordinates and therefore did not group into a separate job type. The exception was the General Safety Superintendent cluster, composed of eight members who spent over half of their time in performing supervisory and managerial functions.

Since most of the job clusters and job types do not differentiate between task performed by skill level group members, an analysis of DAFSC groups has been accomplished to determine specific differences between the 5-, 7-, and 9-skill levels.

TABLE 5
SELECTED BACKGROUND DATA ON CAREER LADDER FUNCTIONAL GROUPS

NUMBER IN GROUP PERCENT OF SAMPLE PERCENT LOCATED IN CONUS	GENERAL SAFETY PERSONNEL		MISSILE SAFETY PERSONNEL		GROUND SAFETY SUPERINTENDENTS		SPECIAL UNIT SAFETY PERSONNEL		NUCLEAR SAFETY PERSONNEL		MISHAP REPORTS PERSONNEL		SAFETY PROGRAM INSPECTOR		SAFETY COURSE INSTRS	
	272		32	8	6	8	27	13	34							
	68%		8%	2%	2%	2%	7%	3%	8%							
	67%		100%	75%	100%		82%	92%	62%							
DAFSC DISTRIBUTION																
NOT REPORTED	1%		2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%
24130	1%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
24150	26%		13%	0%	33%	15%	39%	53%	25%	15%	15%	39%	53%	15%	53%	53%
24170	59%		63%	25%	67%	70%	61%	41%	75%	70%	70%	61%	41%	70%	41%	41%
24190	13%		22%	75%	0%	15%	0%	0%	0%	15%	15%	0%	0%	15%	3%	3%
AVERAGE GRADE																
AVERAGE MONTHS IN CAREER	5.7		6.0	7.3	5.0	5.6	5.7	5.3	5.3	5.7	5.3	5.3	5.3	5.3	5.3	5.3
FIELD	71		83	112	48	57	69	58	51	69	58	51	51	51	51	51
AVERAGE MONTHS IN SERVICE	174		181	252	139	178	175	153	130	175	153	130	130	130	130	130
PERCENT IN FIRST ENLISTMENT																
PERCENT SUPERVISING	5%		6%	0%	0%	0%	11%	8%	9%	11%	8%	9%	9%	8%	9%	9%
AVERAGE NUMBER OF TASKS PERFORMED	24%		44%	62%	17%	25%	7%	8%	18%	7%	8%	18%	18%	8%	18%	18%
	182		154	114	73	111	73	63	97	73	63	97	97	63	97	97

TABLE 6

COMPARISON OF JOB SATISFACTION INDICES BY CAREER LADDER FUNCTIONAL GROUPS
(PERCENT MEMBERS RESPONDING)

	<u>GENERAL SAFETY PERSONNEL</u>	<u>MISSILE SAFETY PERSONNEL</u>	<u>GROUND SAFETY SUPERINTENDENTS</u>	<u>SPECIAL UNIT SAFETY PERSONNEL</u>	<u>NUCLEAR SAFETY PERSONNEL</u>	<u>MISHAP REPORTS PERSONNEL</u>	<u>SAFETY PROGRAM INSPECTOR</u>	<u>SAFETY COURSE INSTRS</u>
EXPRESSED JOB INTEREST:								
NOT REPORTED	1	0	0	0	0	19	39	12
DULL	5	13	13	50	13	11	8	12
SO-SO	9	9	25	0	0	70	53	76
INTERESTING	85	78	67	50	77			
PERCEIVED UTILIZATION OF TALENTS:								
NOT REPORTED	0	0	0	0	0	4	0	0
NOT AT ALL OR VERY LITTLE	13	9	13	50	13	33	39	15
FAIRLY WELL OR BETTER	87	91	87	50	87	63	61	85
PERCEIVED UTILIZATION OF TRAINING:								
NOT REPORTED	0	0	0	0	0	0	0	3
NOT AT ALL OR VERY LITTLE	14	16	38	33	50	26	8	15
FAIRLY WELL OR BETTER	86	84	62	67	50	74	92	82

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of career ladder structure, forms a part of each occupational analysis. The DAFSC analysis identifies differences in tasks performed between the various skill levels. In addition, this analysis also provides a basis for evaluating the adequacy of the AFR 39-1 Specialty Descriptions and the Specialty Training Standard (STS).

Although there were differences in jobs, as reflected in the SPECIALTY STRUCTURE section, there are a large number of tasks that are common to most safety personnel regardless of where they work or their Duty AFSC. Table 7 shows the distribution of skill levels across the functional groups discussed in the previous section. Table 8 shows the relative time spent by all skill level groups on the various duties in the job inventory.

Skill Level Descriptions

DAFSC 24130

Only two responses were received from DAFSC 24130 personnel when the survey was administered. Since results from only two individuals are not definitive, discussion of the 3-skill level has not been included in this report.

DAFSC 24150

Five-skill level airmen were found in all of the career ladder job groups except the Ground Safety Superintendents. A majority (63 percent) were working in jobs within the General Safety Personnel cluster while 16 percent served as Safety Course Instructors. Small percentages also worked in the Missile Safety and Mishap Reports clusters and the Safety Program Inspector job type group as shown in Table 7. Table 8 shows that 5-skill level personnel spend approximately 11 percent of their average work time on multi-media education compared to five percent for 7-skill level and two percent for 9-skill level personnel. The only other duty in which 5-skill level spent a representatively larger percentage of time than the 7- and 9-skill level groups was in performing general safety inspecting, occupying an average of 37 percent of all 5-skill level personnel's time.

Tasks which are most representative of 5-skill level jobs are shown in Table 9. These include inspection of sites or facilities for currency of safety bulletin boards, for shipping hazards, utilization of protective equipment or clothing, electrical hazards, etc. In addition, these personnel prepare safety inspection reports, interview witnesses and injured persons directly involved in mishaps, and analyze initial mishap findings to determine reportability. These kinds of tasks however are not unique to 5-skill level personnel since most are also characteristic of the 7-skill level.

DAFSC 24170

Seven-skill level safety technicians worked in all of the job groups, with the majority, as with 5-skill levels, working as general safety personnel (see Table 7). Generally 7-skill level personnel perform the same kinds of jobs as 5-skill level personnel except that as a group they spend less time in performing general safety inspections and multi-mode education while spending slightly more time on supervisory, managerial, and forms, records, and reports-related work (see Table 8). Typically, tasks performed by 7-skill level technicians are shown in Table 10. These include many of the same tasks typical of the 5-skill level, including analyzing initial mishap findings to determine reportability and to determine causative factors, preparing safety inspection reports, evaluating safety programs, and inspecting sites for various hazards.

Although there were many tasks common to both groups, there were also some significant differences. These differences are demonstrated in Table 11. It should be noted that 7-skill level personnel were more involved in organizing and planning functions such as developing safety incentive programs, establishing mishap notification procedures, and developing various safety reporting systems, while 5-skill level airmen were more involved in conducting general safety inspections and multi-mode education. Unlike many career ladders where 7-skill level personnel are supervisors, less than one-fourth of the Safety Technicians in this ladder supervise other personnel. They are concerned with the technical and program management functions of safety rather than in supervision and management of subordinate personnel.

DAFSC 24190

Only 11 percent of the 9-skill level incumbents in this survey were identified in the Ground Safety Superintendent job type. Of the remainder, 61 percent were found in the General Safety cluster, 12 percent in missile safety, seven percent in mishap reports and two percent in the Safety Course instructors cluster. In most career ladders superintendents spend a majority of their time in performance of tasks in the duties of organizing and planning, directing and implementing, inspecting and evaluating, and training. In this ladder, however, superintendents average only approximately one-third of their time on these duties. The additional two-thirds of their time is spent on performance of technical tasks common to all skill levels plus a number of review, coordination and evaluation tasks in the technical duties. As shown in Table 12, many of the tasks that are representative of 9-skill level personnel are the same as those characteristic of the 7-skill level. There were, however, some basic differences. As shown in Table 13, very few 9-skill level airmen clean or wash military vehicles while over half of the 7-skill level perform this task. Additionally higher percentages of 7-skill level personnel perform many of the more routine tasks of the ladder while higher percentages of 9-skill level performs tasks concerned with the personnel functions of super-

vision such as assignment of personnel to duty positions, preparation of APRs, planning or scheduling OJT and evaluating trainees, scheduling leaves or passes, etc. These are tasks which are performed by relatively few 7-skill level technicians.

Summary of DAFSC Groups

The 241X0 career ladder is very homogeneous since a large number of tasks are common to all skill levels. Although specialized jobs were identified within the ladder by cluster analysis, many of the general safety functions and tasks were common to most of these groups. Although there was a general trend for higher skill level airmen to assume some of the more comprehensive program development and evaluative tasks, there was not the clear cut distinctions between functions performed by 5- and 7-skill level personnel and 7- and 9-skill level personnel that is found in most career ladders. Respondents at all skill levels were actively involved in all phases of the safety program. Five-skill level members conducted safety inspections, investigated mishaps, advised and/or trained personnel in accident prevention, completed the various forms, and maintained statistics. Seven-skill level technicians performed the same functions but also became more involved in program development and improvement such as development of publications, preparing briefings, or approving deviations from established procedures. Even so, very few (less than 25 percent) supervised subordinate personnel. The 9-skill level incumbent performs essentially the same tasks as the 7-skill level except for some of the more routine tasks. Slightly over half of the superintendents supervise subordinate safety personnel. The performance of personnel functions such as assignment, evaluation, and training for these subordinates is one of the primary differences between the 7-skill level and the superintendent in this ladder.

TABLE 7

DISTRIBUTION OF DAFSC MEMBERS AMONG CAREER LADDER JOBS
(PERCENT RESPONDING)

<u>CAREER LADDER JOBS</u>	DAFSC 24150 (N=111)	DAFSC 24170 (N=246)	DAFSC 24190 (N=57)
CLUSTERS:			
I GENERAL SAFETY PERSONNEL	63	65	61
II MISSILE SAFETY PERSONNEL	4	8	12
VI MISHAP REPORTS PERSONNEL	4	8	7
VIII SAFETY COURSE INSTRUCTORS	16	6	2
INDEPENDENT JOB TYPE GROUPS:			
III GROUND SAFETY SUPERINTENDENTS	0	*	11
IV SPECIAL UNIT PERSONNEL	*	1	0
V NUCLEAR SAFETY NCOs	*	2	0
VII SAFETY PROGRAM INSPECTORS	5	3	0
NOT GROUPED	7	7	7
	<u>100</u>	<u>100</u>	<u>100</u>

* LESS THAN 1%

TABLE 8

RELATIVE PERCENT TIME SPENT ON DUTIES
BY DAFSC GROUPS

<u>DUTIES</u>	DAFSC 24150 (N=111)	DAFSC 24170 (N=246)	DAFSC 24190 (N=57)
A ORGANIZING AND PLANNING	5	8	10
B DIRECTING AND IMPLEMENTING	5	7	10
C INSPECTING AND EVALUATING	3	4	6
D TRAINING	2	3	4
E MAINTAINING FORMS, RECORDS, AND REPORTS	9	11	10
F PERFORMING MISHAP INVESTIGATIONS	14	14	11
G PERFORMING GENERAL SAFETY INSPECTIONS	37	33	30
H PERFORMING MISSILE SAFETY INSPECTIONS	2	2	1
I CONDUCTING MULTI-MEDIA EDUCATION	11	5	2
J COORDINATING AND MAINTAINING LIAISON	5	6	8
K PERFORMING GENERAL SAFETY FUNCTIONS	6	7	6
L MANAGING NUCLEAR SURETY PROGRAM	1	1	1

TABLE 9
REPRESENTATIVE TASKS PERFORMED
BY DAFSC 24150 PERSONNEL

TASKS	PERCENT PERFORMING
G257 INSPECT SITES OR FACILITIES FOR CURRENCY OF SAFETY BULLETIN BOARDS	82
E143 PREPARE SAFETY INSPECTION REPORTS	82
F165 INTERVIEW INJURED PERSONS DIRECTLY INVOLVED IN MISHAPS	82
F166 INTERVIEW WITNESSES	82
F159 ANALYZE INITIAL MISHAP FINDINGS TO DETERMINE REPORT- ABILITY	78
K400 DRIVE MILITARY VEHICLES	78
K158 ANALYZE INITIAL MISHAP FINDINGS TO DETERMINE CAUSATIVE FACTORS	77
G269 INSPECT SITES OR FACILITIES FOR SLIPPING HAZARDS	77
G270 INSPECT SITES OR FACILITIES FOR UTILIZATION OF PERSONAL PROTECTIVE EQUIPMENT OR CLOTHING	77
F176 PREPARE MISHAP REPORTS	77
G258 INSPECT SITES OR FACILITIES FOR ELECTRICAL HAZARDS	76
G268 INSPECT SITES OR FACILITIES FOR SAFETY PRACTICES EMPLOYED IN USE OF TOOLS OR EQUIPMENT	76
G205 INSPECT ATHLETIC FIELDS	76
G266 INSPECT SITES OR FACILITIES FOR POSTING OF ACCIDENT PRE- VENTION SIGNS	75
F186 REVIEW HOSPITAL ADMISSION OR DISPOSITION LOGS	74
G289 REVIEW INSPECTION SCHEDULES AND FOLLOW-UP ACTIONS	74
F160 COORDINATE MISHAP NOTIFICATION INFORMATION WITH APPRO- PRIATE AGENCIES	74
G265 INSPECT SITES OR FACILITIES FOR OPERATIONAL STATUS OF EMERGENCY LIGHTING SYSTEMS	73
G252 INSPECT SITE OR FACILITY MACHINERY FOR PROPER MACHINE GUARDING	72
G288 REVIEW INSPECTION REPORTS FOR PROPER CORRECTIVE ACTION TO PREVENT RECURRENCE	70

AVERAGE NUMBER OF TASKS PERFORMED - 141

TABLE 10
 REPRESENTATIVE TASKS PERFORMED
 BY DAFSC 24170 PERSONNEL

<u>TASKS</u>	<u>PERCENT PERFORMING</u>
F159 ANALYZE INITIAL MISHAP FINDINGS TO DETERMINE REPORT- ABILITY	87
E143 PREPARE SAFETY INSPECTION REPORTS	85
C82 EVALUATE SAFETY PROGRAMS	84
F158 ANALYZE INITIAL MISHAP FINDINGS TO DETERMINE CAUSATIVE FACTORS	84
G258 INSPECT SITES OR FACILITIES FOR ELECTRICAL HAZARDS	84
F176 PREPARE MISHAP REPORTS	83
G257 INSPECT SITES OR FACILITIES FOR CURRENCY OF SAFETY BULLETIN BOARDS	83
C74 EVALUATE HAZARD REPORTS	81
A7 DEVELOP OR PUBLISH SAFETY EDUCATION MATERIALS	80
G288 REVIEW INSPECTION REPORTS FOR PROPER CORRECTIVE ACTION TO PREVENT RECURRENCE	80
G269 INSPECT SITES OR FACILITIES FOR SLIPPING HAZARDS	80
G270 INSPECT SITES OR FACILITIES FOR UTILIZATION OF PERSONAL PROTECTIVE EQUIPMENT OR CLOTHING	80
K400 DRIVE MILITARY VEHICLES	80
F165 INTERVIEW INJURED PERSON DIRECTLY INVOLVED IN MISHAPS	80
A9 DEVELOP SAFETY CHECKLISTS	78
G201 INSPECT ADMINISTRATIVE AREAS	78
G289 REVIEW INSPECTION SCHEDULES AND FOLLOW-UP ACTIONS	78
G268 INSPECT SITES OR FACILITIES FOR SAFETY PRACTICES EMPLOYED IN USE OF TOOLS OR EQUIPMENT	78
F188 REVIEW MISHAP OR INCIDENT REPORTS	77
F160 COORDINATE MISHAP NOTIFICATION INFORMATION WITH APPRO- PRIATE AGENCIES	77
F140 PREPARE DRAFTS OF GENERAL CORRESPONDENCE OR REPORTS	77

AVERAGE NUMBER OF TASKS PERFORMED - 154

TABLE 11

TASKS MOST DIFFERENTIATING 5- AND 7-SKILL LEVEL PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASK	DAFSC 21450	DAFSC 21470	DIFFERENCE
I331 CONDUCT MOTORCYCLE TRAFFIC SAFETY COURSES (COURSE VII)	46	22	+24
I345 PREPARE CLASSROOM ROSTERS	47	24	+23
I342 CONDUCT STANDARD TRAFFIC SAFETY COURSES (COURSE I)	43	21	+22
I327 CONDUCT ADVANCE TRAFFIC TECHNIQUES COURSES (COURSE IV)	45	23	+22
I348 RECORD INDIVIDUAL STUDENT SCORES ON CLASSROOM TEST SCORE	45	24	+21
I357 SET UP MULTI-MEDIA TEACHING SYSTEMS FOR CLASSROOM PRESENTATION	44	23	+21
I329 CONDUCT GOVERNMENT MOTOR VEHICLE (GMV) OPERATOR COURSES (COURSE VI)	44	24	+20
I348 RECORD INDIVIDUAL STUDENT SCORES ON CLASSROOM TEST SCORE SHEETS	47	27	+20
I333 CONDUCT SUPERVISOR SAFETY COURSES (COURSE VIII)	43	24	+19
I330 CONDUCT LOCAL CONDITION TRAFFIC SAFETY COURSES (COURSE II)	45	26	+19
G272 INSPECT SWIMMING FACILITIES	59	41	+18
G204 INSPECT ARTS AND CRAFTS CENTERS	68	51	+17
G212 INSPECT CLUB FACILITIES	67	50	+17
G246 INSPECT RECREATION CENTERS	63	47	+16
A10 DEVELOP SAFETY INCENTIVE PROGRAMS	26	55	-29
A12 ESTABLISH MISHAP NOTIFICATION PROCEDURES	38	65	-27
A4 DETERMINE WORK PRIORITIES	36	63	-27
A7 DEVELOP OR PUBLISH SAFETY EDUCATION MATERIALS	54	80	-26
A17 PLAN OR PREPARE BRIEFINGS	51	76	-25
A6 DEVELOP LOCAL SAFETY PUBLICATIONS	40	64	-24
G194 APPROVE OR DISAPPROVE REQUESTS FOR DEVIATION FROM ESTABLISHED SAFETY PROCEDURES	18	41	-23
A5 DEVELOP HAZARD REPORTING SYSTEMS	28	50	-22
B47 IMPLEMENT MISHAP NOTIFICATION PROCEDURES	43	65	-22
K408 RESEARCH TECHNICAL PUBLICATIONS OR MANUALS	49	70	-21
E153 REVIEW SAFETY AWARDS IN ACCORDANCE WITH AFR 900-26	20	41	-21

TABLE 12
 REPRESENTATIVE TASKS PERFORMED
 BY DAFSC 24190 PERSONNEL

<u>TASKS</u>	<u>PERCENT PERFORMING</u>
C76 EVALUATE INSPECTION REPORTS OR PROCEDURES	91
C82 EVALUATE SAFETY PROGRAMS	89
E140 PREPARE DRAFTS OF GENERAL CORRESPONDENCE OR REPORTS	88
A7 DEVELOP OR PUBLISH SAFETY EDUCATION MATERIALS	86
B52 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES	84
A17 PLAN OR PREPARE BRIEFINGS	82
F175 PREPARE MISHAP BRIEFS OR SAFETY BULLETINS	82
A6 DEVELOP LOCAL SAFETY PUBLICATIONS	82
F188 REVIEW MISHAP OR INCIDENT REPORTS	81
C74 EVALUATE HAZARD REPORTS	81
K408 RESEARCH TECHNICAL PUBLICATIONS OR MANUALS	79
G288 REVIEW INSPECTION REPORTS FOR PROPER CORRECTIVE ACTION TO PREVENT RECURRENCE	79
B58 PARTICIPATE IN STAFF MEETINGS	79
A9 DEVELOP SAFETY CHECKLISTS	79
C72 EVALUATE COMPLIANCE WITH WORK STANDARDS	75
G289 REVIEW INSPECTION SCHEDULES AND FOLLOW-UP ACTIONS	75
A27 SERVE AS ADVISER TO COMMANDER ON SAFETY RELATED TOPICS	74
E148 REVIEW AF FORMS 457	74
F159 ANALYZE INITIAL MISHAP FINDINGS TO DETERMINE REPORT- ABILITY	72
B48 IMPLEMENT SAFETY PROGRAMS	72
B65 SUPERVISE 24170 SAFETY TECHNICIAN PERSONNEL	54

AVERAGE NUMBER OF TASKS PERFORMED - 161

TABLE 13

TASKS WHICH BEST DIFFERENTIATE BETWEEN 7- AND 9-SKILL LEVEL PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASK	DAFSC 24170	DAFSC 24190	DIFFERENCE
K394 CLEAN OR WASH MILITARY VEHICLES	51	16	+35
K404 PERFORM OPERATOR MAINTENANCE OF MILITARY VEHICLES	58	30	+28
F168 OBTAIN BACKGROUND INFORMATION ABOUT WITNESSES OR INJURED PERSONS	70	42	+28
F176 PREPARE MISHAP REPORTS	83	61	+22
K415 SERVE ON ATHLETIC BOARDS	29	07	+22
F165 INTERVIEW INJURED PERSONS DIRECTLY INVOLVED IN MISHAPS	80	58	+22
I343 OPERATE MULTI-MEDIA TEACHING SYSTEMS	27	5	+22
E156 TYPE CORRESPONDENCE, RECORDS, OR REPORTS	50	28	+22
F166 INTERVIEW WITNESSES	79	58	+21
K393 CLEAN FACILITIES	49	30	+19
B65 SUPERVISE 24170 SAFETY TECHNICIAN PERSONNEL	14	54	-40
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	18	56	-38
A2 ASSIGN SPONSORS FOR NEW PERSONNEL	17	54	-37
C86 PREPARE APRS	28	63	-35
A18 PLAN OR SCHEDULE ON-THE-JOB TRAINING (OJT)	25	53	-28
D108 EVALUATE PROFICIENCY TRAINING OF ASSIGNED PERSONNEL	15	39	-24
D107 EVALUATE OJT TRAINEES	15	39	-24
A26 SCHEDULE LEAVES OR PASSES	30	53	-23
C67 ENDORSE AIRMAN PERFORMANCE REPORTS (APRS)	13	35	-22
J363 COORDINATE WITH CIVILIAN AGENCIES ON SAFETY PROMOTIONAL MATERIALS	38	60	-22

ANALYSIS OF TAFMS GROUPS

This section describes an analysis of personnel within this career ladder based on the years of Total Active Federal Military Service (TAFMS). Table 14 lists the relative percent time spent on duties within the inventory based on TAFMS. Time periods included are first enlistment (1-48 months TAFMS), second enlistment (49-96 months TAFMS), and career (97 plus months TAFMS). Table 15 shows the percentage of these enlistment categories in each of the major career ladder job groups.

As shown in Table 15, 58 percent of first enlistment personnel were primarily working as General Safety Personnel, with smaller percentages functioning as Mishap Investigations and Reports Personnel, and Safety Course Instructors. Second term airmen, in addition to working as General Safety personnel, primarily worked as Safety Course Instructors and Safety Program Inspectors while career airmen worked in all jobs identified in the cluster analysis.

Based on the relative percent time spent on duties (Table 14), personnel in their first enlistment (1-48 months AFMS) spend over half their time on tasks within the duties of performing general safety inspections and performing mishap investigations. In addition, as previously discussed in the cluster analysis and the DAFSC analysis, these personnel also conduct multi-media education. Approximately 12 percent of the time spent by first term airmen is on this function. Second term airmen differ only slightly from their more experienced counterparts except for the 15 percent of time spent on conducting multi-media education which is 10 percent higher for these individuals than for career personnel.

As shown in Tables 16 and 17, many of the tasks performed by 70 percent or more of the first and second enlistment groups are the same or are very similar. There were, however, several differences in tasks performed between these two groups. The most significant of these differences are reflected in Table 18. The first group of tasks listed are those which are more characteristic of the first enlistment group; however, most of these are also performed by 40 percent or more of the second enlistment group. Tasks listed on the second half of this table are those which are more characteristic of second term personnel. These tasks reflect progression toward the overall management and coordination of safety programs as experience is gained in the safety career field.

TABLE 14
PERCENT TIME SPENT ON DUTIES
ACROSS TAFMS GROUPS

TASK	MONTHS TOTAL ACTIVE FEDERAL MILITARY SERVICE		
	1-48 (N=24)	49-96 (N=40)	97+ (N=358)
A ORGANIZING AND PLANNING	4	5	8
B DIRECTING AND IMPLEMENTING	4	6	7
C INSPECTING AND EVALUATING	2	4	5
D TRAINING	1	3	3
E MAINTAINING FORMS, RECORDS, AND REPORTS	10	11	10
F PERFORMING MISHAP INVESTIGATIONS	16	12	14
G PERFORMING GENERAL SAFETY INSPECTIONS	37	31	33
H PERFORMING MISSILE SAFETY INSPECTIONS	3	1	2
I CONDUCTING MULTI-MEDIA EDUCATION	12	15	5
J COORDINATING AND MAINTAINING LIAISON	3	5	6
K PERFORMING GENERAL SAFETY FUNCTIONS	7	6	6
L MANAGING NUCLEAR SURETY PROGRAM	*	*	*

TABLE 15
PERCENT OF TAFMS GROUPS PERFORMING CAREER LADDER JOBS

CAREER LADDER JOBS	FIRST ENLISTMENT (N=24)	SECOND ENLISTMENT (N=40)	CAREER (N=358)
CLUSTERS:			
I GENERAL SAFETY PERSONNEL (GP045)	58	63	65
II MISSILE SAFETY PERSONNEL (GP046)	8	03	8
VI MISHAP INVESTIGATIONS AND REPORTS PERSONNEL (GP021)	13	0	7
VIII SAFETY COURSE INSTRUCTORS	13	22	6
INDEPENDENT JOB TYPES:			
III GROUND SAFETY SUPERINTENDENTS (GP049)	0	0	2
IV SPECIAL UNIT SAFETY PERSONNEL (GP032)	0	3	1
V NUCLEAR SAFETY NCOs (GP0114)	0	0	2
VII SAFETY PROGRAM INSPECTOR (GP020)	4	7	3
NOT GROUPED	4	2	6
	<u>100</u>	<u>100</u>	<u>100</u>

TABLE 16

REPRESENTATIVE TASKS PERFORMED BY FIRST ENLISTMENT PERSONNEL
(1-48 MONTHS AFMS)

<u>TASKS</u>	<u>PERCENT PERFORMING</u>
F166 INTERVIEW WITNESSES	92
F165 INTERVIEW INJURED PERSONS DIRECTLY INVOLVED IN MISHAPS	88
K394 CLEAN OR WASH MILITARY VEHICLES	88
F186 REVIEW HOSPITAL ADMISSION OR DISPOSITION LOGS	83
E143 PREPARE SAFETY INSPECTION REPORTS	83
F168 OBTAIN BACKGROUND INFORMATION ABOUT WITNESSES OR INJURED PERSONS	83
G205 INSPECT ATHLETIC FIELDS	83
F159 ANALYZE INITIAL MISHAP FINDINGS TO DETERMINE REPORT- ABILITY	79
G257 INSPECT SITES OR FACILITIES FOR CURRENCY OF SAFETY BULLETIN BOARDS	79
G270 INSPECT SITES OR FACILITIES FOR UTILIZATION OF PERSONAL PROTECTIVE EQUIPMENT OR CLOTHING	79
G266 INSPECT SITES OR FACILITIES FOR POSTING OF ACCIDENT PREVENTION SIGNS	79
G269 INSPECT SITES OR FACILITIES FOR SLIPPING HAZARDS	79
G210 INSPECT CARPENTRY SHOPS	79
F187 REVIEW HOSPITAL EMERGENCY TREATMENT LOGS	75
K393 CLEAN FACILITIES	75

TABLE 17

REPRESENTATIVE TASKS PERFORMED BY SECOND ENLISTMENT PERSONNEL
(49-96 MONTHS AFMS)

<u>TASKS</u>	<u>PERCENT PERFORMING</u>
F165 INTERVIEW INJURED PERSONS DIRECTLY INVOLVED IN MISHAPS	83
G258 INSPECT SITES OR FACILITIES FOR ELECTRICAL HAZARDS	80
G257 INSPECT SITES OR FACILITIES FOR CURRENCY OF SAFETY BULLETIN BOARDS	80
F158 ANALYZE INITIAL MISHAP FINDINGS TO DETERMINE CAUSATIVE FACTORS	80
F166 INTERVIEW WITNESSES	80
G255 INSPECT SITES OR FACILITIES FOR COLOR CODING OF PHYSICAL HAZARDS	78
F176 PREPARE MISHAP REPORTS	78
G252 INSPECT SITE OR FACILITY MACHINERY FOR PROPER MACHINE GUARDING	78
F159 ANALYZE INITIAL MISHAP FINDINGS TO DETERMINE REPORT- ABILITY	78
E143 PREPARE SAFETY INSPECTION REPORTS	75
K400 DRIVE MILITARY VEHICLES	75
G266 INSPECT SITES OR FACILITIES FOR POSTING OF ACCIDENT PREVENTION SIGNS	75
C74 EVALUATE HAZARD REPORTS	75
G268 INSPECT SITES OR FACILITIES FOR SAFETY PRACTICES EMPLOYED IN USE OF TOOLS OR EQUIPMENT	73
G265 INSPECT SITES OR FACILITIES FOR OPERATIONAL STATUS OF EMERGENCY LIGHTING SYSTEMS	73

TABLE 18

REPRESENTATIVE DIFFERENCES IN TASKS PERFORMED BY FIRST AND SECOND ENLISTMENT PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	1st ENLST 1-48	2nd ENLST 49-96	DIFFERENCE
K393 CLEAN OR WASH MILITARY VEHICLES	88	48	+40
E152 REVIEW IN COMING CAT-I OR CAT-II MATERIEL DEFICIENCY REPORTS	46	18	+28
F168 OBTAIN BACKGROUND INFORMATION ABOUT WITNESSES OR INJURED PERSONS	83	60	+23
G205 INSPECT ATHLETIC FIELDS	83	60	+23
G226 INSPECT GYMNASIUMS	71	50	+21
G235 INSPECT MOTOR VEHICLE MAINTENANCE SHOPS	71	50	+21
G272 INSPECT SWIMMING FACILITIES	63	43	+20
K393 CLEAN FACILITIES	75	55	+20
G210 INSPECT CARPENTRY SHOPS	79	60	+19
G243 INSPECT PLAYGROUNDS OR PICNIC AREAS	67	48	+19
B38 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	0	40	-40
K403 PARTICIPATE AS A MEMBER OR ADVISER ON GROUND SAFETY COUNCILS	8	48	-40
E116 FILE CORRESPONDENCE	33	70	-37
J372 COORDINATE WITH LATERAL AGENCIES ON SPECIAL SAFETY CAMPAIGNS OR PROGRAMS	13	48	-35
B37 COORDINATE WITH STAFF ACTIVITIES AND OPERATING SECTIONS TO PROVIDE SAFETY TRAINING FOR SUPERVISORS	25	60	-35
J367 COORDINATE WITH FIRE DEPARTMENT ON EXPLOSIVES SAFETY OR FIRE RELATED MATERIALS	25	60	-35
J371 COORDINATE WITH LATERAL AGENCIES ON SAFETY INSPECTIONS	21	55	-34
A22 PREPARE OR UPDATE OFFICE OPERATING INSTRUCTIONS	4	38	-34
B46 IMPLEMENT HAZARD REPORTING SYSTEMS	29	63	-34
C84 EVALUATE SUGGESTIONS	17	50	-33
E156 TYPE CORRESPONDENCE, RECORDS, OR REPORTS	17	50	-33

COMPARISON OF DIRECT ENTRY AND RETRAINED PERSONNEL IN FIRST JOB (1-24 MONTHS IN SAFETY CAREER LADDER)

In 1976 a major policy change was made in qualification of personnel for assignment into the Safety Career Field. This change allowed direct entry of personnel from basic training whereas previously only personnel who had achieved 5-skill level qualification in another career ladder were eligible for entrance. To determine possible effects that this change has had on the career ladder, comparisons have been made of tasks performed, job satisfaction, and predicted retention rates between direct entry personnel and those transferring from other career ladders.

For this comparison airmen in their first safety assignment (1-24 months experience in the safety career ladder) were divided into two groups. The first group contained only first term airmen who come directly into the Safety career ladder from basic training. The second group contained personnel with over 48 Months Total Active Federal Military Service (TAFMS) who transferred from another career field into Safety.

As shown in Tables 19 and 20, there is considerable overlap between the most common tasks performed by these two groups of individuals indicating, that in many respects the jobs are at least somewhat similar. However, some primary differences in tasks performed were found. The most significant of these differences are illustrated in Table 21. The first eight tasks are those performed by significantly higher percentages of the personnel who cross-trained from other career fields while the second ten tasks were more commonly performed by the first enlistment personnel who come directly into the career field from basic training. Note that tasks performed by higher percentages of the group that cross-trained are those that more senior airmen would normally perform such as attend meetings and participating as members or advisors on ground safety councils, coordinating with staff agencies on management safety effectiveness, implement safety programs and participate in staff meetings. Tasks performed by higher percentages of the first term personnel included a number of general laboring tasks such as cleaning, washing vehicles and performing squadron details. In addition, these personnel also performed a number of general technical tasks such as inspecting athletic fields, gymnasiums, hospital facilities, etc. Personnel in the first enlistment group however, perform a large number of technical safety tasks and are not limited to the menial cleaning and detail tasks referenced above.

On the basis of these comparisons it is obvious that there are differences in task performance between these two groups. Both groups are working in their first safety assignment, and have almost the same experience in the career field. Higher percentages of personnel in the first enlistment group have attended the basic course and have completed the 5-level CDC training. The difference, therefore in tasks performed appears to be a function of the length of Air Force

experience and higher grade level attained by personnel transferring from other career fields.

A review of background information provided by respondents in each of the above groups revealed that 83 percent of the first enlistment personnel found their job interesting compared to 91 percent for the 49+ TAFMS group. Over 90 percent of the first enlistment group however, felt that their job utilized their talents and training fairly well or better. One primary difference between these two groups was noted in their plans to reenlist. Seventy-four percent of the 49+ TAFMS group indicated that they would or probably would reenlist compared to only 39 percent of the first enlistment group reflecting this intention. (The 39 percent reenlistment intent is comparable to that of first enlistment personnel across all AF career ladders.)

Summary

Analysis of tasks performed revealed that personnel with previous Air Force experience in other career ladders tended to perform more management and coordination tasks while larger percentages of first term airmen with the same amount of time in the Safety career ladder performed more routine cleaning and squadron detail functions in addition to a large number of technical safety tasks. (There were no indications from the survey data or from contacts with field personnel were not performing their share of the technical safety tasks.)

TABLE 19

FIFTEEN MOST COMMON TASKS PERFORMED BY FIRST ENLISTMENT PERSONNEL
WITH 1-24 MONTHS IN THE SAFETY CAREER FIELD

TASKS	PERCENT PERFORMING
*F166 INTERVIEW WITNESSES	91
*F165 INTERVIEW INJURED PERSONS DIRECTLY INVOLVED IN MISHAPS	87
K394 CLEAN OR WASH MILITARY VEHICLES	87
F186 REVIEW HOSPITAL ADMISSION OR DISPOSITION LOGS	83
*E143 PREPARE SAFETY INSPECTION REPORTS	83
*G257 INSPECT SITES OR FACILITIES FOR CURRENCY OF SAFETY BULLETIN BOARDS	83
*G270 INSPECT SITES OR FACILITIES FOR UTILIZATION OF PERSONAL PROTECTIVE EQUIPMENT OR CLOTHING	83
F168 OBTAIN BACKGROUND INFORMATION ABOUT WITNESSES OR INJURED PERSONS	83
G266 INSPECT SITES OR FACILITIES FOR POSTING OF ACCIDENT PREVENTION SIGNS	83
G269 INSPECT SITES OR FACILITIES FOR SLIPPING HAZARDS	83
*F159 ANALYZE INITIAL MISHAP FINDINGS TO DETERMINE REPORTABILITY	78
G265 INSPECT SITES OR FACILITIES FOR OPERATIONAL STATUS OF EMERGENCY LIGHTING SYSTEMS	78
*G258 INSPECT SITES OR FACILITIES FOR ELECTRICAL HAZARDS	78
*G268 INSPECT SITES OR FACILITIES FOR SAFETY PRACTICES EMPLOYED IN USE OF TOOLS OR EQUIPMENT	78
F187 REVIEW HOSPITAL EMERGENCY TREATMENT LOGS	74

* TASKS PERFORMED BY OVER 75 PERCENT OF ALL RESPONDENTS

TABLE 20

FIFTEEN MOST COMMON TASKS PERFORMED BY 49+ TAFMS PERSONNEL
WITH 1-24 MONTHS SERVICE IN THE SAFETY CAREER FIELD

TASKS	PERCENT PERFORMING
*F165 INTERVIEW INJURED PERSONS DIRECTLY INVOLVED IN MISHAPS	91
*F166 INTERVIEW WITNESSES	91
F176 PREPARE MISHAP REPORTS	88
*G258 INSPECT SITES OR FACILITIES FOR ELECTRICAL HAZARDS	88
*F159 ANALYZE INITIAL MISHAP FINDINGS TO DETERMINE REPORTABILITY	85
F158 ANALYZE INITIAL MISHAP FINDINGS TO DETERMINE CAUSATIVE FACTORS	85
*G268 INSPECT SITES OR FACILITIES FOR SAFETY PRACTICES EMPLOYED IN USE OF TOOLS OR EQUIPMENT	82
K400 DRIVE MILITARY VEHICLES	82
*G257 INSPECT SITES OR FACILITIES FOR CURRENCY OF SAFETY BULLETIN BOARDS	82
F160 COORDINATE MISHAP NOTIFICATION INFORMATION WITH APPROPRIATE AGENCIES	82
G252 INSPECT SITE OF FACILITY MACHINERY FOR PROPER MACHINE GUARDING	79
C74 EVALUATE HAZARD REPORTS	79
F175 PREPARE MISHAP BRIEFS OR SAFETY BULLETINS	79
*G270 INSPECT SITES OR FACILITIES FOR UTILIZATION OF PERSONAL PROTECTIVE EQUIPMENT OR CLOTHING	76
*E143 PREPARE SAFETY INSPECTION REPORTS	76

* TASKS PERFORMED BY OVER 75 PERCENT OF ALL RESPONDENTS

TABLE 21

COMPARISON OF TASK PERFORMANCE BETWEEN FIRST JOB PERSONNEL WITH 1-48 MONTHS AFMS AND WITH 49+ AFMS

TASKS	1-48 MOS AFMS	49+ AFMS	DIFFERENCE
K390 ATTEND COMBINED SAFETY COUNCIL MEETINGS	26	71	-45
K403 PARTICIPATE AS A MEMBER OR ADVISER ON GROUND SAFETY COUNCILS	9	47	-38
J378 COORDINATE WITH STAFF AGENCIES ON MANAGEMENT SAFETY EFFECTIVENESS	13	47	-34
B48 IMPLEMENT SAFETY PROGRAMS	26	59	-33
B58 PARTICIPATE IN STAFF MEETINGS	26	59	-33
F163 ESTIMATE MONETARY PROPERTY DAMAGE LOSSES	26	59	-33
E156 TYPE CORRESPONDENCE, RECORDS, OR REPORTS	13	44	-31
G285 REVIEW CURRENCY OF ACCIDENT PREVENTION PROGRAMS OR PREACCIDENT PLANS	35	65	-30
A4 DETERMINE WORK PRIORITIES	17	47	-30
A23 PREPARE SAFETY COUNCIL AGENDAS	22	50	-28
K394 CLEAN OR WASH MILITARY VEHICLES	87	56	+31
K405 PERFORM SQUADRON DETAILS	65	41	+24
K393 CLEAN FACILITIES	74	53	+21
G205 INSPECT ATHLETIC FIELDS	83	65	+18
G256 INSPECT SITES OR FACILITIES FOR CORROSION	61	44	+17
G226 INSPECT GYMNASIUMS	70	53	+17
G229 INSPECT HOSPITAL FACILITIES	70	53	+17
G228 INSPECT HIGH-PRESSURE GAS STORAGE AREAS	65	50	+15

ANALYSIS OF TASK DIFFICULTY

From a listing of airmen assigned to the Safety career ladder, individuals holding the 7-skill level from various commands and locations were selected to rate the difficulty of each task. Tasks were rated on a nine-point scale from extremely low to extremely high difficulty, with difficulty defined as the length of time required for the average airman to learn to do the task satisfactorily. Interrater reliability (as assessed through components of variance of standard group means) for the 63 raters was .96. Ratings were adjusted so that tasks of average difficulty have ratings of 5.00.

The 15 tasks rated the most difficult of all tasks in the inventory are listed in Table 22. A majority of these tasks pertained to performing missile safety inspections (Duty H) and were performed by only a small percentage of career ladder personnel. A more meaningful list of the most difficult tasks is included in Table 23. These tasks are the highest difficulty tasks that are performed by 50 percent or more of the survey respondents. Note that these tasks involve not only the inspection of various facilities but also include such functions as development of local safety publications, interpretation of policies, directives, and procedures, implementation and evaluation of safety programs, and analyzing mishap findings to determine causative factors.

The least difficult tasks in this inventory are listed in Table 24. Most of these tasks are general clean up, vehicle operation, or other routine tasks involving little or no specialized knowledge of the Safety career field. Many are tasks which are performed by personnel who work in specialized jobs and are therefore performed by relatively few individuals. The tasks included in Table 25 are those which have a low difficulty index but are performed by at least half of the respondents to the survey. Although involving some of the same tasks as shown in Table 24 above, generally these tasks relate more to the administration of a safety program and include primarily clerical or routine safety program administration tasks such as reviewing police blotters or hospital admission or disposition logs for reportable accidents, reviewing accident report forms, filing correspondence, maintaining status boards, and inspecting sites for currency of safety bulletin boards. Table 26 lists representative tasks which are of average difficulty.

Job Difficulty Index (JDI)

Having computed the task difficulty index for each item, it is now possible to compute the Job Difficulty Index (JDI) for the groups identified in the survey analysis. This index provides a relative measure of which jobs, when compared to all other jobs in the career field, are more or less difficult. An equation using the number of tasks performed and the average difficulty per unit time spent as variables is the basis for the JDI index. The index ranges from 1 for very easy jobs to 25 for very difficult jobs. The indices are adjusted

so that the average job difficulty index is 13.00. The JDI was computed for the clusters, job types, and independent job types identified in the SPECIALTY STRUCTURE. These indices are listed in Table 27.

Personnel working in Missile Safety jobs had the highest computed JDI of all of the various kinds of jobs identified by the clustering analysis. The 32 individuals within the Missile Safety Personnel cluster performed 154 tasks with an Average Task Difficulty Per Unit Time Spent (ATDPUTS) of 5.28 which gave a job difficulty index of 16.5. The two job types which made up this cluster demonstrate the inter-relationships between number of tasks performed and the average difficulty of individual tasks. For example, although the ATDPUTS for the Nuclear Missile Safety Personnel was 5.25, somewhat lower than that for the Missile Launch Safety Personnel, 5.36, the larger number of tasks performed by the nuclear group (181) resulted in a JDI of 17.6 for this group as compared to a JDI of 15.0 for missile launch personnel who performed only 114 tasks. This same relationship between number of tasks performed and ATDPUTS may be noted for all groups listed, with number of tasks performed having a major impact on the JDI for each group.

It should be noted that in terms of overall job difficulty, General Safety Personnel, representing 64 percent of the sample, had a relatively high job difficulty, exceeded only by relatively small numbers of personnel working in missile or nuclear safety jobs. The lowest job difficulty indices were found for jobs primarily concerned with multi-media instruction.

TABLE 22

THE 15 MOST DIFFICULT 241X0 TASKS AS RATED BY SAFETY TECHNICIANS

<u>TASKS</u>	<u>TASKS DIFFICULTY INDEX</u>	<u>PERCENT MEMBERS PERFORMING</u>
H316 MONITOR MISSILE HAZARDOUS OPERATIONS	7.41	11
H304 EVALUATE PROCEDURES FOR TOXIC CHEMICAL DISPOSAL	7.41	6
H305 EVALUATE PROCEDURES FOR UPLOADINGS, DOWNLOADING, OR PAY- LOAD EXCHANGE OF MISSILE OR WEAPON SYSTEMS	7.40	12
H306 EVALUATE STATIC FIRING OF MISSILE PROPULSION SYSTEMS	7.37	3
G262 INSPECT SITES OR FACILITIES FOR OPERATIONAL USE OF LASERS OR MASERS	7.24	15
H308 INSPECT INSTALLATION, REMOVAL, OR TRANSPORTATION OF WEAPON OR SPACE SYSTEMS	7.23	14
H307 EVALUATE TOXIC PROPELLANT PLUME AREAS FOR PROPELLANT OPERATIONS	7.17	5
H314 INSPECT PROPELLANT STORAGE AND TRANSFER AREAS	7.17	6
H302 EVALUATE PROCEDURES FOR PROPELLANT TANK ENTRIES	7.17	6
H303 EVALUATE PROCEDURES FOR PROPELLANT TRANSFER OR SERVICING	7.13	6
H318 OPERATE SAFETY CONSOLE AT CONTROL CENTER DURING HAZARDOUS OPERATIONS	7.06	2
H301 EVALUATE MISSILE PRESSURIZATION OPERATIONS ABOVE ONE- FOURTH BURST PRESSURE	7.00	5
H319 PLOT TOXIC PROPELLANT PLUME AREAS FOR PROPELLANT OPERATIONS	6.98	3
H299 EVALUATE COMBINED SYSTEM TESTS ON MISSILE SYSTEMS	6.93	7
H300 EVALUATE HAZARDOUS PHASES OF MISSILE COUNTDOWN PROCEDURES	6.90	5

TABLE 23

THE 15 MOST DIFFICULT TASKS PERFORMED BY 50 PERCENT OR MORE
OF THE SURVEY RESPONDENTS

<u>TASKS</u>	<u>TASKS DIFFICULTY INDEX</u>	<u>PERCENT MEMBERS PERFORMING</u>
G211 INSPECT CHEMICAL STORAGE AREAS	6.52	62
G229 INSPECT HOSPITAL FACILITIES	6.56	51
B52 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES	6.49	68
B48 IMPLEMENT SAFETY PROGRAMS	6.46	63
C82 EVALUATE SAFETY PROGRAMS	6.45	80
A6 DEVELOP LOCAL SAFETY PUBLICATIONS	6.38	61
G223 INSPECT FUEL CELL ACTIVITIES	6.35	50
G259 INSPECT SITES OR FACILITIES FOR ENVIRONMENTAL HEALTH HAZARDS	6.34	66
G260 INSPECT SITES OR FACILITIES FOR HANDLING OR STORAGE OF HAZARDOUS MATERIALS	6.31	72
E145 PREPARE USAF MISHAP/INCIDENT REPORT FORMS (AF FORM 711 SERIES)	6.26	68
F158 ANALYZE INITIAL MISHAP FINDINGS TO DETERMINE CAUSATIVE FACTORS	6.22	79
G228 INSPECT HIGH-PRESSURE GAS STORAGE AREAS	6.22	60
G241 INSPECT PETROLEUM, OILS, AND LUBRICANTS (POL) FACILITIES	6.20	57
A10 DEVELOP SAFETY INCENTIVE PROGRAMS	6.16	50
A14 PLAN ADDITIONAL DUTY SAFETY OFFICER OR NCO TRAINING PROGRAMS	6.13	61

TABLE 24

THE 15 TASKS RATED LEAST DIFFICULT BY SAFETY TECHNICIANS

<u>TASKS</u>	<u>TASKS DIFFICULTY INDEX</u>	<u>PERCENT MEMBERS PERFORMING</u>
A2 ASSIGN SPONSORS FOR NEW PERSONNEL	1.89	19
K394 CLEAN OR WASH MILITARY VEHICLES	2.32	50
K393 CLEAN FACILITIES	2.45	48
K405 PERFORM SQUADRON DETAILS	2.56	43
A26 SCHEDULE LEAVES OR PASSES	2.56	29
I326 CLEAN TAPE RECORDER HEADS	2.67	24
I349 REMOVE OR INSTALL PROJECTOR LAMPS	2.69	28
I348 RECORD INDIVIDUAL STUDENT SCORES ON CLASSROOM TEST SCORE	2.74	27
I338 DEMAGNETIZE TAPE RECORDER HEADS	2.82	23
K400 DRIVE MILITARY VEHICLES	2.87	77
K404 PERFORM OPERATOR MAINTENANCE OF MILITARY VEHICLES	3.15	53
I345 PREPARE CLASSROOM ROSTERS	3.16	28
I346 PREPARE COMPLETION OF MULTI-MEDIA SAFETY EDUCATION COURSE	3.18	20
F161 DIRECT TRAFFIC	3.22	9
I347 PREPARE FAILURE TO ATTEND MULTI-MEDIA SAFETY EDUCATION COURSE LETTERS	3.22	22

TABLE 25

THE 15 LEAST DIFFICULT TASKS PERFORMED BY 50 PERCENT OR MORE
OF THE SURVEY RESPONDENTS

<u>TASKS</u>	<u>TASKS DIFFICULTY INDEX</u>	<u>PERCENT MEMBERS PERFORMING</u>
K394 CLEAN OR WASH MILITARY VEHICLES	2.32	50
K400 DRIVE MILITARY VEHICLES	2.87	70
K404 PERFORM OPERATOR MAINTENANCE OF MILITARY VEHICLES	3.15	53
F191 REVIEW SECURITY POLICE BLOTTERS	3.33	50
F186 REVIEW HOSPITAL ADMISSION OR DISPOSITION LOGS	3.33	70
F187 REVIEW HOSPITAL EMERGENCY TREATMENT LOGS	3.34	65
G257 INSPECT SITES OR FACILITIES FOR CURRENCY OF SAFETY BULLETIN BOARDS	3.45	81
E116 FILE CORRESPONDENCE	3.50	60
F167 MAINTAIN REPORTABLE ACCIDENT STATUS BOARDS	3.70	64
F189 REVIEW MOTOR VEHICLE ACCIDENT REPORTS (SF 91)	3.73	62
G266 INSPECT SITES OR FACILITIES FOR POSTING OF ACCIDENT PRE- VENTION SIGNS	3.84	77
G201 INSPECT ADMINISTRATIVE AREAS	3.84	74
E128 MAINTAIN SAFETY INSPECTION STATUS BOARDS	3.88	56
F162 DISTRIBUTE MISHAP BRIEFS OR SAFETY BULLETINS	3.91	70
F184 REVIEW FEDERAL EMPLOYEE'S NOTICE OF INJURY OR OCCUPATIONAL ILLNESSES FORMS (CURRENT CA OR L.S. FORMS)	4.02	50

TABLE 26

REPRESENTATIVE TASKS RATED AVERAGE IN DIFFICULTY PERFORMED
BY 50 PERCENT OR MORE OF THE SURVEY RESPONDENTS

<u>TASKS</u>	<u>TASKS DIFFICULTY INDEX</u>	<u>PERCENT MEMBERS PERFORMING</u>
G214 INSPECT CONDITION OF SITE OR FACILITY AREAS	5.15	72
G285 REVIEW CURRENCY OF ACCIDENT PREVENTION PROGRAMS OR PRE- ACCIDENT PLANS	5.15	61
F178 PREPARE STAFF COORDINATION OF MISHAP OR INCIDENT REPORTS	5.14	44
G274 INSPECT TIRE SHOPS	5.13	56
G261 INSPECT SITES OR FACILITIES FOR OIL, DIESEL, OR GASOLINE LEAKAGES	5.12	66
G249 INSPECT SITE OR FACILITY FIRE SAFETY EQUIPMENT	5.11	68
A4 DETERMINE WORK PRIORITIES	5.01	57
G256 INSPECT SITES OR FACILITIES FOR CORROSION	5.00	54
F175 PREPARE MISHAP BRIEFS OR SAFETY BULLETINS	4.91	74
G212 INSPECT CLUB FACILITIES	4.91	56
B33 BRIEF CONTRACTORS AT PRE-WORK CONFERENCES	4.87	55
G242 INSPECT PHOTO FACILITIES	4.86	50
G270 INSPECT SITES OR FACILITIES FOR UTILIZATION OF PERSONAL PROTECTIVE EQUIPMENT OR CLOTHING	4.84	78
A12 ESTABLISH MISHAP NOTIFICATION PROCEDURES	4.83	58
J361 COORDINATE WITH BIOMEDICAL OFFICER ON SAFETY INSPECTIONS	4.83	64

TABLE 27

JOB DIFFICULTY INDICES AND RELATED DATA BY JOB GROUPS

<u>JOB GROUP</u>	<u>AVERAGE NUMBER OF TASKS PERFORMED</u>	<u>ATDPUTS*</u>	<u>JDI</u>
I. GENERAL SAFETY PERSONNEL	182	4.97	14.8
A. BASE SAFETY PERSONNEL	206	4.95	15.8
B. UNIT SAFETY PERSONNEL	124	4.97	12.4
C. HEADQUARTERS STAFF NCOs	153	5.07	14.8
D. BASE SAFETY INSPECTOR	100	5.04	11.4
II. MISSILE SAFETY PERSONNEL	154	5.28	16.5
A. NUCLEAR MISSILE SAFETY PERSONNEL	181	5.25	17.6
B. MISSILE LAUNCH SAFETY PERSONNEL	114	5.36	15.0
III. GROUND SAFETY SUPERINTENDENTS	114	5.08	12.7
IV. SPECIAL UNIT SAFETY PERSONNEL	73	4.85	7.7
V. NUCLEAR SAFETY NCOs	111	5.38	14.9
VI. MISHAP INVESTIGATIONS AND REPORTS PERSONNEL	73	4.89	7.9
A. MISHAP INVESTIGATIONS PERSONNEL	85	4.80	8.0
B. SAFETY REPORTS NCOs	62	4.97	7.7
VII. SAFETY PROGRAM INSPECTORS	63	5.06	8.6
VIII. SAFETY COURSE INSTRUCTORS	97	4.37	4.6
A. MULTI-MEDIA INSTRUCTOR-SAFETY SPECIALIST	176	4.62	11.4
B. MULTI-MEDIA INSTRUCTOR	71	4.24	2.1

*AVERAGE TASK DIFFICULTY PER UNIT TIME SPENT

ANALYSIS OF DAFSC 24150 CONUS AND OVERSEAS GROUPS

In many career ladders, there are pronounced differences between the kinds of tasks performed by 5-skill level personnel working in jobs within the CONUS and those performed by their counterparts overseas. Therefore, these two groups have been compared to determine their similarities and differences.

Approximately 23 percent of the 5-skill level personnel responding to the survey were assigned overseas. These personnel performed, on the average, seven more tasks than those assigned to CONUS positions; however, their task difficulty index was slightly lower than that for the CONUS group.

As shown in Table 28, the primary difference between these two groups is that overseas personnel spend almost twice as much of their work time on conducting multi-media education than their counterparts in the CONUS. In addition, overseas personnel also spend more time on such tasks as indoctrinate newly assigned personnel, prepare traffic education training status reports, file correspondence, and maintain multi-media equipment inspection and maintenance forms, tasks which are directly related to the conduct of multi-media safety education. CONUS personnel, on the other hand, are more involved in the conduct of inspections, as illustrated by the second group of tasks shown on Table 29.

TABLE 28

PERCENT TIME SPENT ON DUTIES BY CONUS - OVERSEAS GROUPS

<u>DUTIES</u>	<u>DAFSC 24150 IN CONUS (N=86)</u>	<u>DAFSC 24150 OVERSEAS (N=26)</u>
A ORGANIZING AND PLANNING	4	6
B DIRECTING AND IMPLEMENTING	5	7
C INSPECTING AND EVALUATING	3	4
D TRAINING	2	2
E MAINTAINING FORMS, RECORDS, AND REPORTS	9	12
F PERFORMING MISHAP INVESTIGATIONS	15	12
G PERFORMING GENERAL SAFETY INSPECTIONS	39	30
H PERFORMING MISSILE SAFETY INSPECTIONS	2	0
I CONDUCTING MULTI-MEDIA EDUCATION	9	17
J COORDINATING AND MAINTAINING LIAISON	5	6
K PERFORMING GENERAL SAFETY FUNCTIONS	7	6
L MANAGING NUCLEAR SURETY PROGRAMS	1	0

TABLE 29

REPRESENTATIVE DIFFERENCES IN TASKS PERFORMED BETWEEN 5-SKILL LEVEL PERSONNEL
IN CONUS AND OVERSEAS
(PERCENT MEMBERS PERFORMING)

TASKS	CONUS (N=86)	OVERSEAS (N=26)	PERCENT DIFFERENCE
I351 SCHEDULE DRIVER IMPROVEMENT COURSES (COURSE IV)	21	58	-37
I350 SCHEDULE ADVANCE TRAFFIC TECHNIQUES COURSES (COURSE IV)	17	54	-37
A3 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	15	50	-35
I356 SCHEDULE SUPERVISOR SAFETY COURSE (VIII)	13	46	-33
E144 PREPARE TRAFFIC EDUCATION TRAINING STATUS REPORTS	21	54	-33
J362 COORDINATE WITH CIVILIAN AGENCIES ON SAFETY EDUCATION	22	54	-32
E116 FILE CORRESPONDENCE	47	77	-30
E128 MAINTAIN SAFETY INSPECTION STATUS BOARDS	63	31	+32
G272 INSPECT SWIMMING FACILITIES	66	35	+31
A20 PREPARE INSPECTION SCHEDULES	60	31	+29
G232 INSPECT MATERIAL HANDLING OR LIFTING DEVICES	74	50	+24
G219 INSPECT EXPLOSIVE HANDLING OR STORAGE AREAS	43	19	+24
G295 VERIFY MINIMUM NUMBER OF QUALIFIED PERSONNEL ARE PRESENT DURING HAZARDOUS OPERATIONS	49	27	+22
G228 INSPECT HIGH-PRESSURE GAS STORAGE AREAS	64	42	+22

COMPARISON OF SURVEY DATA TO AFR 39-1 SPECIALTY DESCRIPTIONS

Survey data were compared to the AFR 39-1 Specialty Descriptions for the Safety Specialist and Safety Technician dated 1 June 1979 and the Safety Superintendent, dated 31 October 1978. These descriptions are intended to provide a broad overview of the duties and tasks performed by personnel at the various skill levels. Essentially this objective appears to be achieved with the current descriptions.

As brought out in the ANALYSIS OF DAFSC GROUPS section, there is a great deal of overlap in tasks performed between the 5-skill level specialist and the 7-skill level technician. This overlap appears reasonable, based on the fact that both Specialists and Technicians tend to perform inspections and surveys, review engineering plans and drawings, gather factual information concerning accidents or incidents, prepare and disseminate safety materials, and otherwise generally assist in the accomplishment of the Safety Program. In addition, technicians are more involved in the overall management of safety programs as evidenced by the performance of such tasks as development of safety incentive programs, determining priorities, planning and preparing briefings, implementing mishap notification procedures, etc. Specialists, on the other hand, are more involved in safety education (multi-media) than technicians. These trends are accurately reflected in both specialty descriptions.

Although the data shows that superintendents in this career ladder characteristically perform a larger number of technical tasks than is normal for this level, these personnel also perform managerial and supervisory tasks as outlined in the specialty description. Therefore, the description appears to adequately cover the superintendents' functions.

COMPARISON OF CURRENT SURVEY TO PREVIOUS SURVEY

The results of this survey were compared to the previous occupational survey completed in July 1973. At that time, the Safety career ladder included Safety Specialist/Technician AFSC 241X0; Safety Specialist/Technician, Traffic Safety Assistant, AFSC 241X0A; and Safety Specialist/Technician, Missile, AFSC 241X0B. The "A" and "B" shreds were deleted in 1976.

Although there are no longer shreds to identify personnel working within various specialized kinds of safety jobs, there have been only slight changes in the kinds of jobs identified by the cluster analysis.

The major clusters and job types found in both surveys are shown in Table 30. Although there were slight differences in the structure between the two surveys, generally the kinds of jobs identified were quite similar in terms of tasks accomplished. Other similarities in the data were also observed. For example, although the difficulty indices were not the same, the perception was then as now that tasks related to monitoring missile operations were at the top of the difficulty scale while such tasks as assign sponsors for new personnel, clean or wash military vehicles, record scores on student tests, maintain enrollment data, and perform other clerical tasks concerning the various safety courses, were rated least difficult by those who rated the difficulty of the tasks.

TABLE 30

CLUSTER AND JOB TYPE COMPARISON BETWEEN 1973 AND 1979 SURVEYS

1973 SURVEY TOTAL SAMPLE (N=362)

1979 SURVEY TOTAL SAMPLE (N=422)

GROUND SAFETY I (GRP030, N=199)

GENERAL SAFETY PERSONNEL (GRP045,
N=272)
SPECIAL UNIT SAFETY PERSONNEL
(GRP032, N=6)

GROUND SAFETY II (GRP010, N=17)

MISHAP INVESTIGATIONS AND REPORTS
PERSONNEL (GRP021, N=27)

GROUND AND MISSILE SAFETY (GRP015,
N=93)

MISSILE SAFETY PERSONNEL (GRP046,
N=32)
NUCLEAR SAFETY NCOs (GRP114, N=8)
SAFETY PROGRAM INSPECTORS (GRP020,
N=13)

GROUND SAFETY SUPERINTENDENTS (GRP011,
N=6)

GROUND SAFETY SUPERINTENDENTS (GRP049,
N=8)

TRAFFIC SAFETY (GRP003, N=38)

SAFETY COURSE INSTRUCTORS (GRP022,
N=34)

DISCUSSION

The occupational survey of this career ladder indicates that personnel working within Safety positions are relatively homogeneous in that there is a large number of tasks which are common to a majority of the individuals working within this ladder. From a functional standpoint, however, safety personnel work in a variety of different kinds of organizations with safety programs which vary considerably. These variances are a result of a number of factors. For example, in large wing/base organizations staffed by a number of safety technicians, jobs may be specialized to the extent that safety specialist/technicians perform only part of the safety program such as conduct safety inspections; or handle mishap reports; or instruct in safety courses. In other organizations the size of the safety staff may be such that each member must perform all kinds of safety functions. For example, in small tenant organizations, the safety program may be handled by only one or two safety personnel, considerably broadening the overall scope of performance. In other organizations, specialized functions such as missile safety or nuclear safety may be the primary functions performed.

The variety of safety programs often results in some retraining of personnel as they transfer from one safety office to another. Due to the common core of tasks, this should not be a major problem. Although small groups of personnel were found working in Missile Safety and Traffic Safety jobs, each of these groups contained less than 10 percent of the survey sample. These small percentages do not appear to warrant a return to shreds for these kinds of positions.

Since 1976, airmen have been assigned into the safety career field from the basic training pipeline. Telephone contacts with field personnel and write-in responses to the inventory indicate that there is some concern in the field, that due to the lack of military experience, these personnel will be less effective than the more experienced personnel who cross-train from other ladders. The survey cannot directly answer this question, however, the analysis of tasks performed by direct input airmen and cross-trainers show differences in jobs performed by the two groups. As could be expected airmen with prior military experience performed more tasks than direct input personnel. In addition, higher percentages of these personnel performed some of the more difficult management and technical tasks even though their experience in the safety career field was essentially the same as that of the direct entry airmen. The implications from this data are that as more of the direct input airmen are absorbed into the safety ladder, those personnel with more experience in the ladder will become more involved with the highly technical and managerial functions, with less experienced personnel performing the more routine safety functions. At the same time OJT within the ladder will be more critical since the first term airmen will require training in basic military skills which cross-trainees have already learned. Since the intent to reenlist is much lower for first term than for second term airmen, managers should also expect some increase in training requirements to replace first term losses.