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ENTOMOLOGY CAREER LADDER AFSC 566X0.(U)
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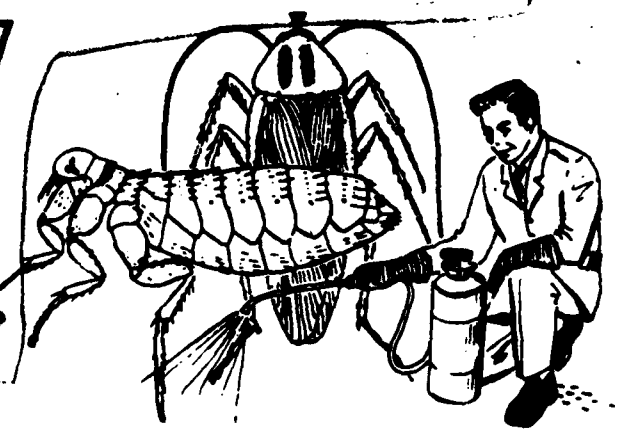
UNITED STATES AIR FORCE

OCCUPATIONAL SURVEY REPORT



ENTOMOLOGY CAREER LADDER

AFSC 566X0

AFPT 90-566-419

MAY 1981

59

OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
AIR TRAINING COMMAND
RANDOLPH AFB, TEXAS 78148

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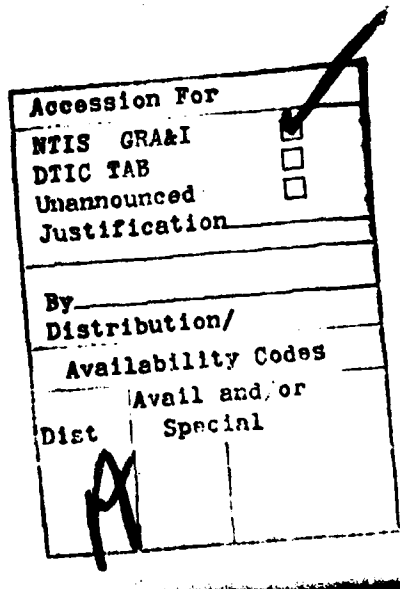

PREFACE

This report presents the results of a detailed Air Force Occupational Survey of the Entomology (AFS 566X0) career ladder. The report was prepared in response to a request by the Air Force Engineering and Services Center at Tyndall AFB Florida. This request was prompted by recent changes to the 566X0 career field that have been created by the new policies and procedures established by the DOD Pest Management Board and the Environmental Protection Agency. 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 survey instrument was developed by Captain Gary K. Patterson, Inventory Development Specialist. First Lieutenant Julia A. Hoskins and Second Lieutenant Beverly C. Turman, Occupational Survey Analysts, analyzed the data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief, Airman Analysis Section, Occupational Analysis Branch, USAF Occupational Measurement Center, Randolph AFB, Texas 78148.

The Air Force occupational analysis program 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 the Air Training Command and surveys were produced annually on 12 enlisted specialties. In 1972, the program was expanded to conduct occupational surveys covering 51 career fields annually. Finally, in 1976, the program was again expanded to also include surveys of officer utilization fields, to support interservice or joint service occupational analyses, and to permit special management applications projects.

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

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SUMMARY OF RESULTS

1. Survey Coverage: Inventory booklets were administered to all Entomology (AFSC 566X0) personnel worldwide. Survey results are based on the responses of 248 job incumbents, representing 65 percent of the career ladder. The overall sample was representative in terms of MAJCOM and grade distributions.

2. Career Ladder Structure: The analysis of the Entomology career ladder structure revealed a highly homogeneous career ladder. Two major job clusters and one independent job type were identified. Factors differentiating between the groups were number of tasks performed and time spent on certain sets of tasks. In general, Senior Entomologists performed both supervisory and administrative functions as well as technical functions, while Junior Entomologists primarily performed technical functions.

3. Career Ladder Progression: Job descriptions for both 3- and 5-skill level respondents were very similar. Job incumbents in both skill level groups were primarily managing and handling pest control materials and maintaining entomology equipment and facilities. Seven-skill level respondents were performing technical tasks similar to those performed by 3- and 5-skill level personnel. In addition, 7 skill level respondents were spending larger amounts of time on supervisory and administrative functions. Similar trends were noted for AFMS groups.

4. CONUS and Overseas Comparisons: The jobs performed by incumbents in both CONUS and overseas locations were very similar. Although there were no major task differences, a greater percentage of overseas respondents spent time on administrative and supervisory tasks than respondents in the CONUS.

5. Bird Air Strike Hazard (BASH) Data: Survey data indicated that very few BASH tasks were performed by a substantial percentage of career ladder personnel. In addition, when compared to other duties, relatively small amounts of time were spent on the tasks which related to this function.

6. Training: Both the 566X0 STS, dated June 1979, and the Plan of Instruction (POI) for Course J3ABR56630 were supported by the survey data. Overall, the STS was very comprehensive in its coverage of jobs and tasks performed by career ladder personnel, and the training provided in the formal technical school adequately covers those major tasks performed by first-term incumbents.

7. AFR 39-1 Specialty Descriptions: Overall, the AFR 39-1 specialty descriptions provided an accurate overview of the duties and responsibilities of the 566X0 personnel. However, the survey data indicated that only small percentages of personnel performed tasks which were related to control procedures to prohibit the transportation of pests and the fumigation of structures and equipment.

8. Comparison to Previous Survey: Both the current survey and the previous June 1975 survey reflect very similar career ladder structures as well as similar trends with respect to the tasks performed by DAFSC and AFMS groups. A comparison of the data from the two time periods indicated a very stable career ladder.

9. Implications: No major changes in classification or training have been recommended.

OCCUPATIONAL SURVEY REPORT
ENTOMOLOGY CAREER LADDER
(AFSC 566X0)

INTRODUCTION

This is a report of an occupational survey of the Entomology career ladder (AFSC 566X0) completed by the Occupational Analysis Branch, USAF Occupational Measurement Center in February 1981. The survey was requested by the Air Force Engineering and Services Center at Tyndall AFB, Florida to obtain current task data for 566X0 career ladder personnel. The previous occupational survey of the 566X0 career ladder was completed in June 1975.

Background

Historically, the Entomology specialty had its beginning in September 1962 as AFS 551X3, Engineer Entomology Specialist. At the time, the ladder consisted of a 3- and 5-skill level, which merged with other ladders at a common 7-level under AFSC 55170, Roads and Grounds Supervisor. In September 1964, entomology functions were redesignated under AFS 566X0 and was made a straight 3-5-7 ladder under the title Engineering Entomology. The term "Engineering" was dropped from the title in April 1973. Since that time, no major changes in the structure or functions have occurred.

The basic job of 566X0 personnel, as described by AFR 39-1, is to perform various activities related to the control and prevention of plant and animal pests, insects, rodents, arthropods, and fungi. This generally includes the application of toxic pesticides on interiors and exteriors of buildings and foundations, the conducting of entomological tests and surveys, the use of nonchemical methods of control, and the performance of scheduled preventive pest control operations. Career ladder members may receive formal training in the basic Entomology Specialist course at the Sheppard Technical Training Center, which is located in Wichita Falls, Texas. This course is approximately six weeks in length.

Objectives

This survey has been requested by the Air Force Engineering and Services Center, Tyndall Air Force Base, Florida, in order to determine the effects of the new policies and procedures that have been established by the DOD Pest Management Board and the Environmental Protection Agency since the last occupational survey was completed. In addition, information was desired on the current methods that are being employed in the prevention and control of bird air strike hazards (BASH). Other major topics that are discussed in this report include: (1) the development and administration of the survey instrument; (2) the job structure within the career ladder; (3) a comparison of career field responsibilities to AFR 39-1 Specialty Descriptions; and, (4) an analysis of skill level groups.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-566-419. As a starting point, tasks from the previous inventory were reviewed, revised, and updated through detailed research of current career ladder publications and directives. This new tentative task list was then reviewed and validated by course personnel at Sheppard AFB, Texas, and subject matter specialists from the Chanute AFB, Eglin AFB, and Hurlburt AFB Entomology shops, as well as personnel from the Air Force Engineering and Services Center. The resulting inventory contained 537 tasks grouped under 18 duty headings. Also included in the inventory was an extensive background section that asked for such information as:

(A) Job Satisfaction
(B) Duty Section
(C) Job Title
(D) Size of Shop
(E) Geographical Area where located
(F) Categories for which incumbents have MAJCOM and/or State Certification
(G) Types of pest control work accomplished by contract on base assigned
(H) Vehicles used in work
(I) Equipment used
(J) Pesticides used

Survey Administration

During the period June through September 1980, consolidated base personnel offices in operational units worldwide administered the job inventory to all incumbents holding a 566X0 DAFSC. These personnel were selected from a computer-generated mailing list which was obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL).

Each respondent who completed a job inventory first completed an identification and biographical information section and then checked all tasks which are performed in their present job. Those tasks that were checked were then rated on a nine-point scale showing the relative amount of time spent on that task as compared to all other tasks checked. The ratings ranged from one (very small amount of time spent) to nine (very large amount of time spent), with a rating of five representing an average amount of time spent in performing a task.

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

Data Processing and Analysis

Once job inventories are returned from the field, they are prepared so that task responses and background information can be optically scanned. Other biographical information (such as name, base, AUTOVON extension) are keypunched onto disks and entered directly into a Univac 1108 computer. Once both sets of data are entered into the computer, the tasks, background, and biographical information are merged to form a complete case record for each respondent. Computer generated programs using Comprehensive Occupational Data Analysis Programs (CODAP) techniques are then applied to the data.

CODAP produces job descriptions for respondents based on their responses to specific inventory tasks. Computer generated job descriptions are available for DAFSC, TAFMS, and MAJCOM groups, and include such information as percent members performing each task, the average percent time spent performing each task, the percent members utilizing various pieces of equipment, and the cumulative average percent time spent by all members on each task in the inventory.

Task Factor Administration

In addition to completing a job inventory, selected senior 566X0 personnel were also asked to complete a second booklet for training emphasis data. These booklets were processed separately from the job inventories, and the information was then used in a number of different analyses which will be discussed in greater detail within this report.

Individuals completing training emphasis booklets were asked to rate all of the tasks on a 10-point scale which ranged from no training required to extremely heavy training required. Training emphasis yields a rating of tasks which indicates where the emphasis should be placed on structured training for first term personnel. Structured training is defined as training provided at resident technical schools, field training detachments (FTD), mobile training teams (MTT), formal OJT, or any other organized training method. The training emphasis data were independently collected from 46 senior personnel in the 566X0 career field (see Table 4 for command representation of training emphasis raters). The interrater reliability (as assessed through the components of variance of standard group means) for these raters was .95, which indicated that there was a high degree of agreement among raters as to which tasks required some form of structured training and which did not. Tasks which were rated highest in training emphasis had ratings of 4.7 and above, while the average rating was 3.0. Those tasks with a training emphasis rating of 1.3 and below could be considered to require very little emphasis in training.

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

***Normally, both Task Difficulty and Training Emphasis ratings are collected for each AFSC. However, in the AFS 566X0, there are less than 50 7-skill level personnel assigned so that it was not possible to collect both types of data. Since TE data has not previously been collected for this career field, for this study only TE data was sought.**

Survey Sample

Incumbents were selected to participate in this survey so as to insure an accurate representation across all MAJCOM and paygrade groups. Tables 1 and 2 list the distribution of assigned and sampled personnel by major command and paygrade groups, respectively. Table 3 reflects the distribution of the survey sample in terms of total months Total Active Federal Military Service (TAFMS). As demonstrated by these tables, the overall sample was highly representative of the career ladder population as a whole.

TABLE 1

COMMAND REPRESENTATION OF SURVEY SAMPLE

COMMAND	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
SAC	24	27
TAC	20	19
MAC	16	17
ATC	9	9
USAFE	8	7
PACAF	7	8
AFLC	5	6
AFSC	3	3
AAC	2	2
OTHER	6	2

TOTAL ASSIGNED: 381
TOTAL SAMPLED: 248
PERCENT SAMPLED: 65%

TABLE 2

PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

PAYGRADE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
AIRMAN	38	36
E-4	22	24
E-5	20	23
E-6	13	12
E-7	5	4
E-8	1	*
E-9	1	*

* DENOTES LESS THAN ONE PERCENT

TABLE 3

AFMS DISTRIBUTION OF 566X0 SAMPLE

	MONTHS TOTAL ACTIVE FEDERAL MILITARY SERVICE					
	1-48	49-96	97-144	145-192	193-240	241+
NUMBER IN SAMPLE	124	43	30	21	18	6
PERCENT OF SAMPLE	51%	18%	12%	9%	7%	3%

TABLE 4

COMMAND REPRESENTATION OF 566X0 TRAINING EMPHASIS RATERS

COMMAND	PERCENT OF ASSIGNED	PERCENT OF TRAINING EMPHASIS RATERS
SAC	24	18
TAC	20	11
MAC	16	22
ATC	9	18
USAFE	8	11
PACAF	7	11
AFLC	5	5
AFSC	3	2
AAC	2	2
OTHER	6	-
TOTAL	100%	100%

CAREER LADDER STRUCTURE

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

The specialty structure analysis process consists of determining the functional job structure of career ladder 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 Overview

The job structure of the Entomology career ladder was determined by performing a job type analysis of the 248 survey respondents. Based on similarity of tasks performed and the amount of time spent in performing each task, the jobs performed by 566X0 respondents are listed below and illustrated in Figure 1. (GRP or SPC numbers are shown with each group as a cross-reference to computer printed summaries used in the analysis of the survey data.)

I. SENIOR ENTOMOLOGISTS (GRP034, N=134)

   a. Entomology NCOICs (GRP072, N=16)
   b. Entomology Technician-Supervisors (SPC042, N=115)

II. JUNIOR ENTOMOLOGISTS (GRP028, N=78)

   a. General Entomologists (SPC043), N=69)
   b. Identification and Collection Personnel (GRP036, N=9)

III. TERMITE AND INSECT CONTROL PERSONNEL (GRP043, N=5)

The respondents forming these clusters and job types accounted for 88 percent of the total survey sample. The remaining 12 percent of the sample consisted of respondents who did not group with any of the job types or clusters outlined above.

In general, the Entomology career ladder was very homogeneous in terms of tasks performed. As illustrated above, only a small number of job types existed within the career ladder, and overall, these jobs were fairly similar. Generally, only two factors distinguished between the job types: (1) number of tasks performed - job incumbents within certain job types were performing

"additional tasks" in conjunction with the common set of technical tasks performed by all entomologists; and (2) time spent on specific groups of tasks - job incumbents in some job types were spending larger amounts of time performing certain sets of tasks.

Job Group Descriptions

The following paragraphs contain brief descriptions of the clusters, their respective job types, and the independent job type identified through the specialty structure analysis. In addition, Tables 5 and 6 list selected background and job satisfaction information for the groups. Also, Appendix A contains representative task lists for each of the two clusters, their respective job types, and the independent job type.

I. SENIOR ENTOMOLOGISTS (GRP034, N=134). Of the two clusters identified within the 566X0 career ladder, this Senior Entomology cluster was the largest, comprising 54 percent of the total sample. Containing both 5- and 7-skill level personnel, these group members performed a wide range of entomology functions. The senior entomologists managed entomology activities and materials as well as performed general technical functions. Typical tasks performed included:

recommend insect control measures
determine formulations and quantities of chemicals required for pest control operations
schedule occupied quarters spraying
inventory pesticides
apply liquid insecticides using compressed air sprayers

The average payrade for this group was E-5; only 31 percent were in their first enlistment. Fifty-five percent indicated they supervised other personnel.

The first job type identified, Entomology NCOICs (GRP072), was the most senior group. They had the highest average grade (E-6), the highest average TICF (167 months), and the highest TAFMS (193 months) of any group. These predominately 7-skill level job incumbents performed a wide range of supervisory functions. They performed personnel management tasks such as, preparing APRs, in addition to managing entomology activities. Examples of tasks performed by these respondents included:

determine work priorities
supervise Entomology Specialists (AFSC 56650)
prepare APRs
implement base pest control plans
inspect pesticide storage areas

Of the two job groups identified within the Senior Entomology Cluster, the Entomology Technician-Supervisors (SPC042) accounted for the largest number of personnel (N=115). And since this job type comprised such a large portion of the Senior Entomology cluster, their job description was almost identical to the cluster (see Appendix A). Again, similar to the cluster job description, the Entomology Technician-Supervisors were managing

entomology activities and materials and performing general technical functions. Additionally, these job incumbents performed the largest average number of tasks (200). Approximately half of this group (49 percent) supervised other personnel, with the average number of personnel supervised being two.

In comparison to all job groups identified, the Entomology NCOICs spent the largest amount of time performing supervisory functions. All members of this group supervised other personnel and they supervised the largest average number of personnel, which was five. In addition, this group had the highest job satisfaction ratings of any group in the sample (see Table 6).

II. JUNIOR ENTOMOLOGISTS (GRP028, N=78). Although incumbents in this group also perform the same basic range of entomological functions as personnel in the Senior Enomologists cluster, the majority of these respondents are still in their first enlistment (see Table 5) and have a much lower average paygrade (E-3 versus E-5). In addition, they have an average of only 31 months TAFMS, as compared to an average of 101 for the senior personnel. Their job typically involves such tasks as:

prepare insecticide emulsions
prepare insecticide solutions
apply liquid insecticides using compressed air sprayers
clean hand equipment
maintain pesticide storage areas

The first job type within this cluster were the General Entomologists (SPC043, N=69). As a group, these respondents represent the largest job type within the Junior Entomologists cluster. While these incumbents do some application tasks, they also spend a relatively large percentage of their time loading, unloading, and transporting pesticides and hand equipment. In addition, their job frequently includes tasks such as:

clean wash and dry safety equipment
remove or replace components of personal safety equipment
pick up or transport dead animals
prepare insecticide emulsions

These respondents have an average paygrade of E-4, and over 96 percent hold either a 3- or 5-skill level.

The other job type within the Junior Entomologists cluster was the Identification and Collection Personnel (GRP036, N=9). Personnel within this group spend a greater amount of time surveying for pest control requirements than any other group within the survey sample. Typically, this involves such tasks as:

collect household pests, such as ants, crickets, silverfish, or cockroaches
identify field rodents
identify ectoparasites
identify reptiles
identify arthropods
identify domestic rodents

One hundred percent of these incumbents hold either a 3- or 5-skill level, and the average paygrade was E-3. It is interesting to note that members of this group have an average of only 22 months TAFMS, and over 89 percent are still in their first enlistment. Although these incumbents are very junior in grade, and had the lowest number of months TAFMS of any group within the sample, these respondents performed a job that was relatively wide in scope. Consequently, members of this group reported performing an average of 108 tasks compared to the 78 that the General Entomologists performed. Their job consisted of many of the tasks that were typically performed by personnel within the Senior Entomologists cluster in addition to a large number of identification and collection tasks such as those previously listed.

III. TERMITE AND INSECT CONTROL PERSONNEL (GRP043, N=5). This group of respondents spend a relatively large percentage of their time performing termite and insect control functions. Common tasks involve:

apply outdoor fogs using ultra low volume (ULV) generators
inject liquid formulations into dry wood termite galleries
apply insecticides using subslab injection units
apply insecticides to untreated lumber

These incumbents also perform a smaller number of tasks (46) than any of the other groups identified within the sample. Four of the five are stationed overseas. Four of these respondents hold a 5-skill level, with the remaining member holding a 3-skill level. This small group was also distinguished by the fact that 80 percent of these personnel found their job dull or so, while job satisfaction was generally very high across all other job groups (see Table 6). In addition, four of the five members felt that they probably would not reenlist.

Structure Summary

Overall, the AFS 566X0 career ladder was found to be a highly homogeneous technically-oriented specialty. The major distinction which occured between the two main clusters of jobs stem from differences in experience. As expected, the senior personnel usually performed a much larger number of tasks than the more junior respondents. In addition, these senior respondents performed many supervisory as well as common technical tasks.

An examination of job satisfaction information revealed that the majority of personnel found their job interesting, and perceived that their talents and training were utilized at least fairly well to very well. On the average, reenlistment intentions were high among nearly all job groups.

FIGURE 1

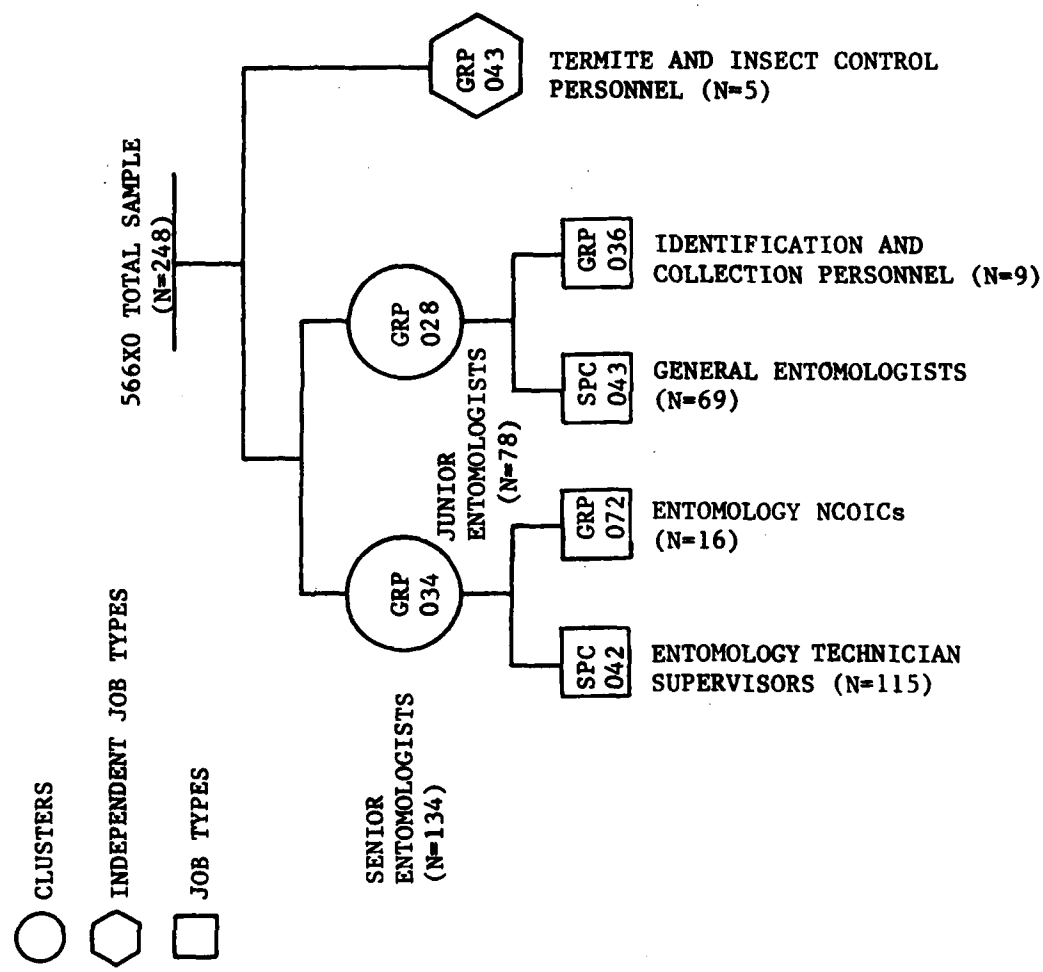
566X0 TOTAL SAMPLE
(N=248)
GRP 043
TERMITE AND INSECT CONTROL PERSONNEL (N=5)
GRP 028
JUNIOR ENTOMOLOGISTS (N=78)
GRP 036
IDENTIFICATION AND COLLECTION PERSONNEL (N=9)
SPC 043
GENERAL ENTOMOLOGISTS (N=69)
GRP 034
SENIOR ENTOMOLOGISTS (N=134)
GRP 072
ENTOMOLOGY NCOICs (N=16)
SPC 042
ENTOMOLOGY TECHNICIAN SUPERVISORS (N=115)
CLUSTERS
INDEPENDENT JOB TYPES
JOB TYPES

TABLE 5

BACKGROUND DATA FOR FUNCTIONAL JOB GROUPS

	SENIOR ENTOMOLOGISTS (GRP034)		JUNIOR ENTOMOLOGISTS (GRP028)		
	ENTOMOLOGY NCOICs (GRP072)	ENTOMOLOGY TECHNICIAN-SUPERVISORS (SPC042)	GENERAL ENTOMOLOGISTS (SPC043)	IDENTIFICATION AND COLLECTION PERSONNEL (GRP036)	TERMITE AND INSECT CONTROL PERSONNEL IJT (GRP043)
NUMBER IN GROUP	16	115	69	9	5
PERCENT OF SAMPLE	6%	46%	28%	4%	2%
PERCENT LOCATED OVERSEAS	50%	22%	16%	-	80%
DAFSC DISTRIBUTION					
56630	-	10%	36%	67%	20%
56650	25%	63%	60%	33%	80%
56670	75%	27%	1%	-	-
NOT REPORTED	-	-	3%	-	-
AVERAGE GRADE	E-6	E-5	E-4	E-3	E-4
AVERAGE MONTHS IN CAREER FIELD	70	167	28	21	42
AVERAGE MONTHS IN SERVICE (TAFMS)	193	89	36	22	43
PERCENT IN FIRST ENLISTMENT	-	34%	78%	89%	60%
PERCENT MEMBERS SUPERVISING	100%	49%	7%	-	20%
AVERAGE NUMBER DIRECTLY SUPERVISED	5	2	*	-	*
AVERAGE NUMBER OF TASKS PERFORMED	152	200	78	108	46

* DENOTES LESS THAN ONE PERCENT

TABLE 6

JOB SATISFACTION DATA FOR FUNCTIONAL JOB GROUPS
(PERCENT MEMBERS RESPONDING)

	SENIOR ENTOMOLOGISTS (GRP034)		JUNIOR ENTOMOLOGISTS (GRP028)		
	ENTOMOLOGY NCOICs (GRP072)	ENTOMOLOGY TECHNICIAN-SUPERVISORS (SPC042)	GENERAL ENTOMOLOGISTS (SPC043)	IDENTIFICATION AND COLLECTION PERSONNEL (GRP036)	TERMITE AND INSECT CONTROL PERSONNEL IJT (GRP043)
I FIND MY JOB:					
DULL	-	5	19	11	40
SO-SO	6	12	16	-	40
INTERESTING	94	81	64	89	20
NOT REPORTED	-	2	1	-	-
MY JOB UTILIZES MY TALENTS:					
LITTLE OR NOT AT ALL	6	17	48	11	80
FAIRLY WELL TO VERY WELL	69	66	46	67	20
EXCELLENTLY TO PERECTLY	25	16	6	22	-
NOT REPORTED	-	1	-	-	-
MY JOB UTILIZES MY TRAINING:					
LITTLE OR NOT AT ALL	-	14	25	11	80
FAIRLY WELL TO VERY WELL	81	69	70	45	20
EXCELLENTLY TO PERFECTLY	19	16	4	44	-
NOT REPORTED	-	1	1	-	-
I PLAN TO REENLIST:					
NO OR PROBABLY NO	44	30	43	33	80
YES OR PROBABLY YES	56	67	54	56	20
NOT REPORTED	-	3	3	11	-

ANALYSIS OF DAFSC GROUPS

In addition to identifying the job structure of the 566X0 career ladder, 3-, 5-, and 7-skill level groups within the career ladder were examined. The purpose of the DAFSC analysis was twofold: (1) to identify similarities and differences among the three skill level groups, and (2) to provide information useful in analyzing the accuracy of career field documents, such as AFR 39-1 specialty descriptions and the Specialty Training Standard (STS).

In making skill level comparisons, the 3-, 5-, and 7-skill level groups were compared on two major factors: (1) relative time spent on duties, and (2) percent members performing tasks. Table 7 depicts the relative time spent on duties by the three skill level groups. To facilitate comparisons in somewhat more global terms, the duties were grouped into Supervisory, Administrative, and Technical functional categories.

At both the 3- and 5-skill levels, the relative time spent on technical duties was quite high. At the 3-skill level, 84 percent of their time was spent performing technical functions while 5-skill level personnel spent 74 percent of their time on the same functions. Twenty percent or less of their time was spent on supervisory functions by either group.

In comparison, 7-skill level respondents were spending larger amounts of time on Supervisory and Administrative functions. However, it should be noted that their job time was split about even between supervisory and administrative duties (49 percent) and technical functions (50 percent). This tends to indicate that the job of senior personnel is still highly technical, which follows the pattern found in the career ladder structure analysis.

In terms of tasks performed, there were a large number of technical tasks which were performed by relatively large percentages of all three skill level groups (see Table 8). These tasks relate primarily to surveying for pests, managing pest control materials, and maintaining entomology equipment.

Representative tasks performed by the 3- and 5-skill level groups are presented in Tables 9 and 10. These predominately technical tasks dealt mainly with managing pest control materials and maintaining entomology equipment. However, although the 3-skill level and 5-skill level groups were very similar with regard to representative tasks performed in common, some tasks did differentiate between these two skill level groups, as illustrated in Table 11. Higher percentages of 3-skill level personnel were performing general tasks not requiring special DAFSC related skills, such as performing janitorial details and driving taxis, while larger percentages of 5-skill level personnel were performing some supervisory tasks dealing with the general management of entomology activities.

Table 12 presents representative tasks performed by 7-skill level personnel. A combination of supervisory and technical tasks were represented, with supervisory tasks predominating the 7-skill level description. Also, tasks which best differentiate between the 5-skill level and 7-skill level groups are listed in Table 13. Higher percentages of 5-skill level respondents performed general functions, such as perform janitorial details, as well as some technical entomology functions. In contrast, higher percentages of

7-skill level respondents performed supervisory tasks primarily related to personnel management, such as prepare APRs, schedule leaves or passes, and counsel trainees on training progress.

A final comparison of DAFSC groups examined across job groups is illustrated in Table 14. The data is displayed in terms of the actual number of members for each skill level group who belong to identified job types. As depicted in Table 14, the majority of DAFSC 56630 respondents were General Entomologists, while the majority of DAFSC 56650 and 56670 respondents were Entomology Technician-Supervisors. Also, as compared to DAFSC 56650 respondents, more 7-skill level respondents were Entomology NCOICs, and only one 56670 repondent was a General Entomologist.

Summary

In general, the 3-and 5-skill level groups were very similar. Both skill level groups spent relatively the same amount of time on all duties, and high percentages of respondents in both skill level groups performed several tasks in common. The only factor which differentiated the two skill level groups was that 5-skill level personnel were performing some additional tasks in all three major functional areas. The 7-skill level respondents were different from both the 3-levels and 5-levels on both time spent on supervisory and administrative functions, as well as on the percent members performing these functions.

TABLE 7

RELATIVE PERCENTAGE OF TIME SPENT ON DUTIES BY DAFSC GROUPS

DUTIES	TOTAL SAMPLE (N=248)	DAFSC 56630 (N=51)	DAFSC 56650 (N=144)	DAFSC 56670 (N=50)
SUPERVISORY				
A ORGANIZING AND PLANNING	12	8	10	17
B DIRECTING AND IMPLEMENTING	5	2	4	9
C INSPECTING AND EVALUATING	4	2	4	9
D TRAINING	2	*	2	5
TOTAL SUPERVISORY	23	12	20	40
ADMINISTRATIVE				
E PERFORMING ADMINISTRATIVE FUNCTIONS	6	3	5	9
TECHNICAL				
F MANAGING AND HANDLING PEST CONTROL MATERIALS	17	20	17	11
G SURVEYING FOR PEST CONTROL REQUIREMENTS	9	12	9	7
H PERFORMING TERMITE CONTROL FUNCTIONS	4	5	4	3
I PERFORMING INSECT CONTROL FUNCTIONS (EXCEPT TERMITE)	8	10	8	5
J PERFORMING GENERAL VERTEBRATE CONTROL FUNCTIONS	5	6	5	3
K PERFORMING AIRFIELD AND HANGAR VERTEBRATE CONTROL	2	3	3	2
L PERFORMING MOLLUSK, FUNGI, AND MOLD CONTROL	*	*	*	*
M FUMIGATING FOR PEST CONTROL	*	*	*	1
N PERFORMING VEGETATION CONTROL FUNCTIONS	1	1	2	1
O PERFORMING MILITARY QUARANTINE INSPECTIONS AND PEST CONTROL	*	*	*	*
P MAINTAINING ENTOMOLOGY EQUIPMENT AND FACILITIES	16	19	17	12
Q PERFORMING GENERAL FUNCTIONS	3	4	3	2
R PERFORMING PRIME BEEF PROGRAM FUNCTIONS	5	4	6	3
TOTAL TECHNICAL	70	84	74	50

TABLE 8

REPRESENTATIVE TASKS PERFORMED BY
DAFSC 56630, 56650, AND 56670 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING		
		DAFSC 56630 (N=51)	DAFSC 56650 (N=144)	DAFSC 56670 (N=50)
P419	CLEAN, WASH, AND DRY SAFETY EQUIPMENT	92	90	78
F189	PREPARE INSECTICIDE EMULSIONS	90	92	82
P417	CLEAN HAND EQUIPMENT	90	86	82
F197	TRANSFER PESTICIDES FROM STORAGE TO DISPERSAL EQUIPMENT	84	90	72
F198	TRANSPORT PESTICIDES OR HAND EQUIPMENT	84	85	76
I282	APPLY LIQUID INSECTICIDES USING COMPRESSED AIR SPRAYERS	82	90	74
F173	DISPOSE OF EMPTY PESTICIDE CONTAINERS	80	87	80
P470	REMOVE OR REPLACE COMPONENTS OF HAND EQUIPMENT	75	82	64
P421	INSPECT PERSONAL SAFETY EQUIPMENT	73	83	86
J311	PICK UP OR TRANSPORT DEAD ANIMALS	73	76	66
G220	INSPECT FOR DOMESTIC RODENT INFESTATION	73	72	76
F177	LOAD OR UNLOAD PESTICIDES ONTO OR FROM VEHICLES	71	85	78
F171	DETERMINE INSECTICIDE APPLICATION METHODS	71	82	86
F179	MAINTAIN PESTICIDE STORAGE AREAS	71	77	78
G215	IDENTIFY DOMESTIC RODENTS	71	76	80
F191	PREPARE INSECTICIDE SOLUTIONS	71	69	70
P418	CLEAN PESTICIDE TANKS OR HOPPERS	69	83	70
G214	IDENTIFY ARTHROPODS	67	71	64
P468	PREPARE ENTOMOLOGY EQUIPMENT FOR STORAGE	67	70	66
P415	CALIBRATE HAND DISPERSAL EQUIPMENT	67	63	58
Q479	DRIVE VEHICLES DURING PESTICIDE APPLICATION	63	76	70
I265	APPLY DUST OR GRANULAR INSECTICIDES OUTDOORS USING HAND EQUIPMENT	63	67	62
P458	PERFORM OPERATOR MAINTENANCE ON PERSONAL SAFETY EQUIPMENT	61	77	74
P467	PERFORM OPERATOR MAINTENANCE ON VEHICLES	61	68	66
P443	PAINT ENTOMOLOGY EQUIPMENT	59	63	64

TABLE 9

REPRESENTATIVE TASKS PERFORMED BY DAFSC 56630 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=51)
P419	CLEAN, WASH, AND DRY SAFETY EQUIPMENT	92
P417	CLEAN HAND EQUIPMENT	90
F189	PREPARE INSECTICIDE EMULSIONS	90
F198	TRANSPORT PESTICIDES OR HAND EQUIPMENT	84
F197	TRANSFER PESTICIDES FROM STORAGE TO DISPERSAL EQUIPMENT	84
I282	APPLY LIQUID INSECTICIDES USING COMPRESSED AIR SPRAYERS	82
F173	DISPOSE OF EMPTY PESTICIDE CONTAINERS	80
J303	DISPOSE OF DEAD ANIMALS	80
P470	REMOVE OR REPLACE COMPONENTS OF HAND EQUIPMENT	75
P421	INSPECT PERSONAL SAFETY EQUIPMENT	73
J311	PICK UP OR TRANSPORT DEAD ANIMALS	73
G220	INSPECT FOR DOMESTIC RODENT INFESTATION	73
F191	PREPARE INSECTICIDE SOLUTIONS	71
P471	REMOVE OR REPLACE COMPONENTS OF PERSONAL SAFETY EQUIPMENT	71
F177	LOAD OR UNLOAD PESTICIDES ONTO OR FROM VEHICLES	71
F179	MAINTAIN PESTICIDE STORAGE AREAS	71
G215	IDENTIFY DOMESTIC RODENTS	71
F171	DETERMINE INSECTICIDE APPLICATION METHODS	71
P418	CLEAN PESTICIDE TANKS OR HOPPERS	69
I289	CLEAN UP AFTER INSECT CONTROL OPERATIONS	67
P415	CALIBRATE HAND DISPERSAL EQUIPMENT	67
P468	PREPARE ENTOMOLOGY EQUIPMENT FOR STORAGE	67
G214	IDENTIFY ARTHOROPODS	67
F172	DETERMINE RODENTICIDE APPLICATION METHODS	67
F176	INVENTORY PESTICIDES	65

TABLE 10

REPRESENTATIVE TASKS PERFORMED BY DAFSC 56650 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=144)
F189	PREPARE INSECTICIDE EMULSIONS	92
I282	APPLY LIQUID INSECTICIDES USING COMPRESSED AIR SPRAYERS	90
P419	CLEAN, WASH, AND DRY SAFETY EQUIPMENT	90
F197	TRANSFER PESTICIDES FROM STORAGE TO DISPERSAL EQUIPMENT	90
F173	DISPOSE OF EMPTY PESTICIDE CONTAINERS	87
P417	CLEAN HAND EQUIPMENT	86
F198	TRANSPORT PESTICIDES OR HAND EQUIPMENT	85
F177	LOAD OR UNLOAD PESTICIDES ONTO OR FROM VEHICLES	85
P421	INSPECT PERSONAL SAFETY EQUIPMENT	83
P418	CLEAN PESTICIDE TANKS OR HOPPERS	83
F171	DETERMINE INSECTICIDE APPLICATION METHODS	82
P470	REMOVE OR REPLACE COMPONENTS OF HAND EQUIPMENT	82
J303	DISPOSE OF DEAD ANIMALS	82
P471	REMOVE OR REPLACE COMPONENTS OF PERSONAL SAFETY EQUIPMENT	80
F195	RESEARCH AFM 91-16 OR OTHER TECHNICAL INSTRUCTIONS FOR PESTICIDE CONTROL RECOMMENDATIONS	78
P458	PERFORM OPERATOR MAINTENANCE ON PERSONAL SAFETY EQUIPMENT	77
F179	MAINTAIN PESTICIDE STORAGE AREAS	77
Q479	DRIVE VEHICLES DURING PESTICIDE APPLICATION	76
J311	PICK UP OR TRANSPORT DEAD ANIMALS	76
G215	IDENTIFY DOMESTIC RODENTS	76
F176	INVENTORY PESTICIDES	75
F172	DETERMINE RODENTICIDE APPLICATION METHODS	75
R505	FIRE M-16 RIFLES	74
A8	COORDINATE WITH BUILDING OCCUPANTS ON TREATMENT OPERATIONS	74
F168	DETERMINE FORMULATIONS AND QUANTITIES OF CHEMICALS REQUIRED FOR PEST CONTROL OPERATIONS	72

TABLE 11

TASKS WHICH BEST DIFFERENTIATE DAFSCs 56630 AND 56650 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 56630 (N=51)	DAFSC 56650 (N=144)	DIFFERENCE
Q495	PERFORM CE JANITORIAL DETAILS	41	26	+15
H247	APPLY INSECTICIDES TO TERMITE MOUNDS	29	16	+13
Q494	PERFORM BASE CLEANUP	43	30	+13
Q478	DRIVE CIVIL ENGINEERING TAXIS	43	33	+10
B58	DIRECT HANDLING, TRANSPORTATION, OR STORING OF PESTICIDES	22	58	-36
B72	SUPERVISE APPRENTICE ENTOMOLOGY SPECIALISTS (AFSC 56630)	16	49	-33
B61	DIRECT UTILIZATION OF EQUIPMENT	16	49	-33
B56	COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	8	39	-31
A14	COORDINATE WORK ACTIVITIES WITH OTHER CIVIL ENGINEERING (CE) SHOPS	29	60	-31
R516	OPERATE INSECTICIDE SPRAYERS OR FOGGERS	25	56	-31
C98	INSPECT EQUIPMENT STORAGE AREAS	25	55	-30
C99	INSPECT PESTICIDE STORAGE AREAS	29	57	-28
E140	COMPLETE MATERIALS AND EQUIPMENT LIST FORMS (AF FORM 1445)	6	34	-28
B68	INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	6	34	-28
A17	DETERMINE WORK POLICIES	25	52	-27
B71	PREPARE REQUISITIONS FOR PESTICIDES	12	38	-26

TABLE 12

REPRESENTATIVE TASKS PERFORMED BY DAFSC 56670 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=50)
A50	SCHEDULE OCCUPIED QUARTERS SPRAYING	90
F176	INVENTORY PESTICIDES	90
F195	RESEARCH AFM 19-16 OR OTHER TECHNICAL INSTRUCTIONS FOR PESTICIDE CONTROL RECOMMENDATIONS	90
A45	RECOMMEND RODENT CONTROL MEASURES	90
C99	INSPECT PESTICIDE STORAGE AREAS	88
F168	DETERMINE FORMULATIONS AND QUANTITIES OF CHEMICALS REQUIRED FOR PEST CONTROL OPERATIONS	86
F171	DETERMINE INSECTICIDE APPLICATION METHODS	86
A42	RECOMMEND INSECT CONTROL MEASURES	86
P421	INSPECT PERSONAL SAFETY EQUIPMENT	86
A48	REVIEW PEST CONTROL REPORTS	86
B61	DIRECT UTILIZATION OF EQUIPMENT	86
B56	COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	86
A8	COORDINATE WITH BUILDING OCCUPANTS ON TREATMENT OPERATIONS	84
A17	DETERMINE WORK PRIORITIES	84
B71	PREPARE REQUISITIONS FOR PESTICIDES	84
F172	DETERMINE RODENTICIDE APPLICATION METHODS	84
B58	DIRECT HANDLING, TRANSPORTING, OR STORING OF PESTICIDES	84
C87	EVALUATE PEST INFESTATIONS	84
F196	REVIEW AFR 91-21 TO DETERMINE PEST MANAGEMENT PROCEDURES	84
A51	SCHEDULE PERIODIC RODENT INSPECTIONS	84
F178	MAINTAIN OPERATING SUPPLIES OF PESTICIDES	84
C101	PREPARE APRs	84
B72	SUPERVISE APPRENTICE ENTOMOLOGY SPECIALISTS (AFSC 56630)	82
F189	PREPARE INSECTICIDE EMULSIONS	82
P417	CLEAN HAND EQUIPMENT	82

TABLE 13

TASKS WHICH BEST DIFFERENTIATE DAFSCs 56650 AND 56670 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 56650 (N=144)	DAFSC 56670 (N=50)	DIFFERENCE
J303	DISPOSE OF DEAD ANIMALS	82	58	+24
Q495	PERFORM CE JANITORIAL DETAILS	26	4	+22
Q478	DRIVE CIVIL ENGINEERING TAXIS	33	12	+21
R536	PREPARE PERSONAL CLOTHING AND EQUIPMENT FOR DEPLOYMENT	57	38	+19
P470	REMOVE OR REPLACE COMPONENTS OF HAND EQUIPMENT	82	64	+18
F197	TRANSFER PESTICIDES FROM STORAGE TO DISPERSAL EQUIPMENT	90	72	+18
Q494	PERFORM BASE CLEANUP	31	14	+17
R516	OPERATE INSECTICIDE SPRAYERS OR FOGGERS	56	40	+16
P441	OPERATIONALLY CHECK VEHICLE MOUNTED HYDRAULIC SPRAYERS	48	32	+16
I282	APPLY LIQUID INSECTICIDES USING COMPRESSED AIR SPRAYERS	90	74	+16
J317	REMOVE NESTS FROM TREES, SHRUBS, OR STRUCTURES OTHER THAN AT HANGARS OR AIRFIELDS	47	32	+15
J314	PLACE OR INSPECT RODENT TRAPS OTHER THAN AT HANGARS OR AIRFIELDS	64	50	+14
E130	ANNOTATE BASE PEST ERROR AUDIT LISTING FORMS	14	72	-58
C101	PREPARE APRs	25	82	-57
A 49	SCHEDULE LEAVES OR PASSES	17	74	-57
B 74	SUPERVISE ENTOMOLOGY SPECIALISTS (AFSC 56650)	27	78	-51
D117	DIRECT OR IMPLEMENT OJT PROGRAMS	14	64	-50
A 48	REVIEW PEST CONTROL REPORTS	37	86	-49
B 56	COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	39	86	-47
C 82	EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	25	72	-47
D112	COUNSEL TRAINEES ON TRAINING PROGRESS	27	74	-47
C 95	INDORSE AIRMEN PERFORMANCE REPORTS (APR)	15	62	-47
C 96	INITIATE PEST CONTROL CERTIFICATION OR RECERTIFICATION	17	64	-47
C 83	EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	17	64	-47

TABLE 14

DAFSC DISTRIBUTION ACROSS JOB GROUPS

JOB GROUPS	DAFSC 56630 (N=43)	DAFSC 56650 (N=125)	DAFSC 56670 (N=44)
ENTOMOLOGY NCOICs	-	4	12
ENTOMOLOGY TECHNICIAN-SUPERVISORS	11	73	31
GENERAL ENTOMOLOGISTS	25	41	1
IDENTIFICATION AND COLLECTION PERSONNEL	6	3	-
TERMITE AND INSECT CONTROL PERSONNEL	1	4	-

COMPARISON OF SURVEY DATA TO AFR 39-1 SPECIALTY DESCRIPTIONS

The survey data were compared with the specialty descriptions for the 566X0 career ladder as outlined in AFR 39-1. Overall, these documents provided a very thorough and comprehensive overview of the duties and responsibilities of 3-, 5-, and 7-skill level personnel. However, while paragraph 2c of the 5-skill level description includes the establishment of control procedures to prohibit the transportation of insects, rodents, and other pests from their native habitats, as well as the fumigation of supplies, equipment, and structures, the data indicate that there are actually very small percentages of career ladder personnel who are involved in performing these functions. These areas should thus be reviewed closely by appropriate career ladder personnel to see if continued listing of these topics in the 5-skill level description is warranted. If these tasks should be performed by most 566X0 personnel, then some type of managment emphasis on these areas may be necessary.

ANALYSIS OF EXPERIENCE (AFMS) GROUPS

In order to assess the normal pattern of change in jobs as a function of experience, differences in tasks performed at various points of service in the career ladder were also analyzed. In the Entomology career ladder, no major deviations from the typical pattern of increasing time spent on supervisory tasks with increasing months TAFMS were noted. Junior incumbents reported spending a greater percentage of their time on technical duties, such as managing and handling pest control materials and maintaining entomology equipment and facilities, while more senior incumbents spent a greater percentage of their time on the supervisory duties (see Table 15). However, although these senior incumbents spend the greatest portion of their time on supervisory functions, it is important to note that senior personnel are also spending relatively large amounts of time performing technical functions. For example, second and third enlistment personnel spend the majority of their total job time performing technical functions, while fourth and fifth enlistment personnel spend approximately equal amounts of time performing technical and supervisory functions. Some of these senior personnel seem to be working as technicians rather than supervisors, while others appear to be working supervisors, i.e., perform both technical and supervisory tasks.

When reviewing the average number of tasks performed by each enlistment group, results indicated that the average number of tasks performed increased with each additional enlistment through the fifth enlistment. However, the average number of tasks performed by the sixth enlistment group dropped substantially. From the first enlistment through the fifth enlistment, additional tasks were added and few tasks were dropped as enlistments increased. These additional tasks were predominately supervisory and administrative tasks. Also, the percent members performing technical tasks decreased very little from the first through the fifth enlistment. However, a large number of technical tasks were performed by only small percentages of the sixth enlistment group, and some technical tasks were not performed by any of these personnel. This decrease in the performance of technical tasks explains the decrease in the average number of tasks performed by the sixth enlistment group where the jobs are primarily supervisory or management oriented.

Job Satisfaction

In addition to a duty and task analysis, 566X0 respondents were also examined on various job satisfaction indices, including perceived job interest, perceived utilization of talents and training, and reenlistment intentions (see Table 16). The results of the job satisfaction responses from the 566X0 respondents were compared with a comparative sample of personnel from all direct support specialties surveyed in '79 (AFSCs: 251X0, 391X0A/B, 753X0, 811X0/A, and 811X2/A). In comparison to the direct support group, entomology respondents indicated higher or more favorable ratings on all job satisfaction indicators. This trend was especially noticeable for the 1-48 month and 49-96 month groups. In relation, the 97+ month groups were much more similar. Of all job satisfaction indicators, the largest difference between the two groups centered on job interest, with large percentages of 566X0 respondents reporting that their job was interesting.

First Enlistment Personnel

In addition to the general TAFMS analysis, first enlistment personnel were examined on the basis of duties and tasks performed, equipment utilized, and job satisfaction information. Table 15 indicates that first enlistment personnel spend the majority of their job time managing and handling pest control materials and maintaining entomology equipment and facilities. As expected, the most common tasks performed by the first enlistment group are related to one of these two major technical functions. Examples of common tasks performed by this group include: prepare insecticide emulsions, transport pesticides or hand equipment, clean hand equipment, and remove or replace components of hand equipment (see Table 17). Also, Table 18 lists entomology equipment which was utilized by at least 30 percent of the first-term personnel.

Table 19 illustrates tasks which best differentiated between the first and second enlistment 566X0 personnel. Tasks which best differentiated between the two groups were predominately from supervisory duties. While relatively large percentages of second enlistment personnel were performing these supervisory tasks, only extremely small percentages of first enlistment personnel were performing similar tasks.

In addition to the analysis of common tasks performed and the comparison with second enlistment personnel, first enlistment personnel were examined according to the jobs they performed in the field. Table 20 shows the distribution of first enlistment personnel across all major job groups identified in the CAREER LADDER STRUCTURE section. As depicted in Figure 2, the majority of the first enlistment personnel were concentrated in two job groups: General Entomologists (44 percent) and Entomology Technician-Supervisors (31 percent). The job descriptions for these two job groups should be closely examined by training personnel to help determine course curricula.

In summary, 566X0 first enlistment personnel perform primarily two technical functions: managing and handling pest control materials and maintaining entomology equipment and facilities. In addition, as compared with other direct support career ladders, the first enlistment personnel in the 566X0 career ladder appeared to be generally more satisfied with their job.

FIGURE 2

DISTRIBUTION OF FIRST ENLISTMENT PERSONNEL ACROSS CAREER LADDER JOBS
(PERCENT MEMBERS RESPONDING)
(N=124)

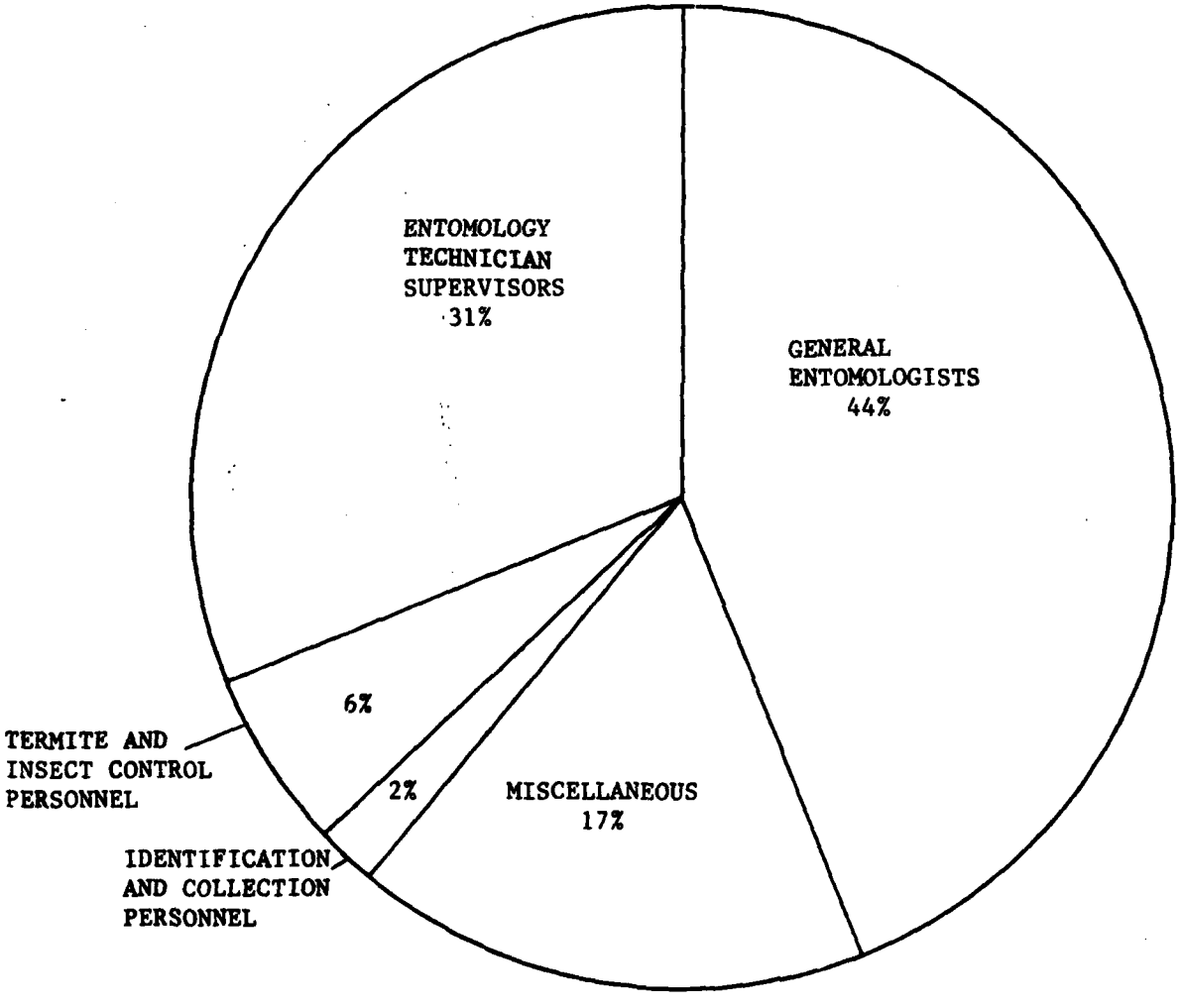

TABLE 15

RELATIVE PERCENTAGE OF TIME SPENT ON DUTIES BY TAFMS GROUPS

DUTIES	ENLISTMENTS 1ST ENL 1-48 MOS (N=124)	2ND ENL 49-96 MOS (N=43)	3RD ENL 97-144 MOS (N=30)	4TH ENL 145-192 MOS (N=21)	5TH ENL 193-240 MOS (N=18)	6TH ENL 241+ MOS (N=6)
SUPERVISORY						
A ORGANIZING AND PLANNING	8	12	16	16	18	29
B DIRECTING AND IMPLEMENTING	3	5	7	9	9	14
C INSPECTING AND EVALUATING	2	5	7	9	8	19
D TRAINING	1	3	3	5	5	3
TOTAL SUPERVISORY	14	25	33	39	40	65
ADMINISTRATIVE						
E PERFORMING ADMINISTRATIVE FUNCTIONS	4	7	8	9	9	9
TECHNICAL						
F MANAGING AND HANDLING PEST CONTROL MATERIALS	20	15	13	12	11	7
G SURVEYING FOR PEST CONTROL REQUIREMENTS	10	9	8	9	6	6
H PERFORMING TERMITE CONTROL FUNCTIONS	4	4	3	2	3	1
I PERFORMING INSECT CONTROL FUNCTIONS (EXCEPT TERMITES)	9	8	6	5	5	1
J PERFORMING GENERAL VERTEBRATE CONTROL FUNCTIONS	6	4	3	2	2	*
K PERFORMING AIRFIELD AND HANGER VERTEBRATE CONTROL	3	2	2	2	2	1
L PERFORMING MOLLUSK, FUNGI, AND MOLD CONTROL	*	*	*	*	*	*
M FUMIGATING FOR PEST CONTROL	*	1	1	*	*	-
N PERFORMING VEGETATION CONTROL FUNCTIONS	2	1	1	1	1	*
O PERFORMING MILITARY QUARANTINE INSPECTIONS AND PEST CONTROL	*	*	*	*	*	-
P MAINTAINING ENTOMOLOGY EQUIPMENT AND FACILITIES	18	17	14	13	15	4
Q PERFORMING GENERAL FUNCTIONS	3	2	2	1	2	1
R PERFORMING PRIME BEEF PROGRAM FUNCTIONS	6	4	5	2	2	4
TOTAL TECHNICAL	81	67	58	49	49	25

TABLE 16

JOB SATISFACTION DATA FOR TAFMS GROUPS
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS		49-96 MONTHS		97+ MONTHS	
	566X0 RESPONDENTS (N=124)	1979 COMPARATIVE SAMPLE (N=3,398)	566X0 RESPONDENTS (N=43)	1979 COMPARATIVE SAMPLE (N=1,654)	566X0 RESPONDENTS (N=75)	1979 COMPARATIVE SAMPLE (N=2,089)
I FIND MY JOB:						
DULL	20	35	9	26	7	13
SO-SO	14	20	14	17	9	12
INTERESTING	66	42	75	53	81	70
NO RESPONSE	-	3	2	4	3	5
MY JOB UTILIZES MY TALENTS:						
NOT AT ALL TO VERY LITTLE	35	50	30	38	20	20
FAIRLY WELL OR BETTER	65	49	68	61	80	78
NO RESPONSE	-	1	2	1	-	2
MY JOB UTILIZES MY TRAINING:						
NOT AT ALL TO VERY LTTLE	23	30	21	32	15	24
FAIRLY WELL OR BETTER	76	68	77	67	84	74
NO RESPONSE	1	2	2	1	1	2
I PLAN TO REENLIST:						
NO OR PROBABLY NO	51	64	30	45	29	30
YES OR PROBABLY YES	48	32	65	51	68	66
NO RESPONSE	1	4	5	4	3	4

COMPARATIVE SAMPLE TAKEN FROM ALL DIRECT SUPPORT SPECIALTIES SURVEYED IN 1979, INCLUDES AFSCs 251X0, 391X0A/B, 753X0, 811X0/A, 811X2/A.

TABLE 17

REPRESENTATIVE TASKS PERFORMED BY FIRST-TERM 566X0 RESPONDENTS WITH 1-48 MONTHS TAFMS

TASKS		FIRST ENLISTMENT PERSONNEL (N=124)
F189	PREPARE INSECTICIDE EMULSIONS	90
P419	CLEAN, WASH, AND DRY SAFETY EQUIPMENT	90
F197	TRANSFER PESTICIDES FROM STORAGE TO DISPERSAL EQUIPMENT	89
P417	CLEAN HAND EQUIPMENT	88
F198	TRANSPORT PESTICIDES OR HAND EQUIPMENT	87
I282	APPLY LIQUID INSECTICIDES USING COMPRESSED AIR SPRAYERS	86
J303	DISPOSE OF DEAD ANIMALS	86
F173	DISPOSE OF EMPTY PESTICIDE CONTAINERS	85
F177	LOAD OR UNLOAD PESTICIDES ONTO OR FROM VEHICLES	81
P421	INSPECT PERSONAL SAFETY EQUIPMENT	79
J311	PICK UP OR TRANSPORT DEAD ANIMALS	79
F179	MAINTAIN PESTICIDE STORAGE AREAS	77
P470	REMOVE OR REPLACE COMPONENTS OF HAND EQUIPMENT	77
P418	CLEAN PESTICIDE TANKS OR HOPPERS	76
F171	DETERMINE INSECTICIDE APPLICATION METHODS	74
G215	IDENTIFY DOMESTIC RODENTS	74
F191	PREPARE INSECTICIDE SOLUTIONS	73
Q479	DRIVE VEHICLES DURING PESTICIDE APPLICATIONS	73
P471	REMOVE OR REPLACE COMPONENTS OF PERSONAL SAFETY EQUIPMENT	73
F176	INVENTORY PESTICIDES	73
F193	PREPARE PESTICIDE BAITS	70
F172	DETERMINE RODENTICIDE APPLICATION METHODS	70
G217	IDENTIFY FIELD RODENTS	69
R505	FIRE M-16 RIFLES	69
G220	INSPECT FOR DOMESTIC RODENT INFESTATION	69

TABLE 18

MOST COMMON ENTOMOLOGY EQUIPMENT
UTILIZED BY 566X0 FIRST ENLISTMENT PERSONNEL

ENTOMOLOGY EQUIPMENT	PERCENT FIRST ENLISTMENT (N=124)
BACKPACK-MIST-DUST-BLOWERS	32
BALANCE SCALES	44
BUFFALO TURBINES	40
BULB DUSTERS	59
COMPRESSED AIR SPRAYERS	93
ELECTRIC MISTERS	46
FOOT PUMP DUSTERS	37
GOPHER TRAPS	46
GRADUATED CYLINDERS	45
GRANULE SPREADERS	48
HAND DUSTERS (EXCEPT BULB TYPE)	48
HAND PLUNGER DUSTERS	38
HYDRAULIC SPRAYERS (FRAME MOUNTED)	54
HYDRAULIC SPRAYERS (TRAILER MOUNTED)	69
LIGHT TRAPS	37
LIVE ANIMAL TRAPS	72
MECHANICAL AEROSOL GENERATORS	43
MICROSCOPES	54
MIXING EQUIPMENT	81
ROTO-HAMMERS	32
SNAP TRAPS	77
SPECIMEN DISPLAY CASES	42
STEEL TRAPS	39
SUBLAB INJECTORS	41
ULV GENERATORS	68

TABLE 19

TASKS WHICH BEST DIFFERENTIATE BETWEEN FIRST AND SECOND ENLISTMENT PERSONNEL

TASKS		ENLISTMENTS 1ST ENL 1-48 MOS (N=124)	2ND ENL 49-96 MOS (N=43)	DIFFERENCE
I284	APPLY OUTDOOR FOGS USING MECHANICAL AEROSOL GENERATORS	24	9	+15
Q478	DRIVE CIVIL ENGINEERING TAXIS	42	28	+14
Q494	PERFORM BASE CLEANUP	40	28	+12
Q226	MAINTAIN LIVE SPECIMENS FOR TRAINING PURPOSES	26	16	+10
Q200	COLLECT FRUIT TREE PESTS	22	12	+10
I275	APPLY LIQUID INSECTICIDES FOR MOSQUITO LARVAL CONTROL USING AEROSOL GENERATORS	19	9	+10
B68	INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	9	61	-52
B56	COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	12	60	-48
B61	DIRECT UTILIZATION OF EQUIPMENT	27	72	-45
E140	COMPLETE MATERIALS AND EQUIPMENT LIST FORMS (AF FORM 1445)	10	51	-41
B58	DIRECT HANDLING TRANSPORTING, OR STORING OF PESTICIDES	33	72	-39
D123	MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	8	46	-38
C98	INSPECT EQUIPMENT STORAGE AREAS	34	72	-38
D112	COUNSEL TRAINEES ON TRAINING PROGRESS	6	44	-38
P462	PERFORM OPERATOR MAINTENANCE ON ROTO HAMMERS	16	53	-37
D114	DETERMINE OJT TRAINING REQUIREMENTS	2	39	-37
A17	DETERMINE WORK PRIORITIES	30	67	-37
A22	ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	13	49	-36

TABLE 20

FIRST ENLISTMENT PERSONNEL DISTRIBUTION ACROSS MAJOR JOB GROUPS

GROUP	FIRST ENLISTMENT PERSONNEL (N=124)
ENTOMOLOGY NCOICs	-
ENTOMOLOGY TECHNICIAN-SUPERVISORS	39
GENERAL ENTOMOLOGISTS	54
IDENTIFICATION AND COLLECTION PERSONNEL	8
TERMITE AND INSECT CONTROL PERSONNEL	3
NOT GROUPED	20

TRAINING ANALYSIS

Training Emphasis Data

Training emphasis data is one important type of occupational survey data which can be used to make training programs more meaningful and relevant to the actual training needs of a career field. The training emphasis data provides information on the training needs of the career field as perceived by experienced job incumbents within the career field. With this data, comparisons can then be made between the perceived training needs and structured training programs in existence to determine the adequacy of the training programs.

In order to assess the training needs of the 566X0 career ladder, 46 senior Entomology specialists and technicians who worked in a variety of commands and locations were asked to rate all tasks on training emphasis for first term personnel. These ratings were processed to produce an ordered listing of all tasks in terms of their recommended emphasis in structured training for first term personnel. These ratings had an average rating of 3.0 and a standard deviation of 1.7 (for a complete description of these ratings, see the of Task Factor Administration section of the INTRODUCTION).

Table 21 lists those tasks rated highest in training emphasis by 566X0 respondents. These technical tasks primarily relate to three major functions: preparation of pest control materials, application of pesticides, and maintenance of entomology equipment. Some specific examples of tasks with high training emphasis ratings were preparing insecticide emulsions, applying liquid insecticides using compressed air sprayers, and cleaning hand equipment. In addition, most of these tasks rated highest on training emphasis were performed by a majority of 566X0 first enlistment personnel.

Tasks rated lowest in training emphasis by 566X0 respondents are presented in Table 22. These tasks primarily involve supervisory functions and general functions not requiring special DAFSC related skills. Examples of tasks rated low in training emphasis include draft budget or financial requirements, perform CE janitorial details, and perform snow removal operations. In general, most of these tasks were performed by less than 10 percent of first term personnel. However, a few general labor tasks such as, perform CE janitorial details and perform base cleanup, were performed by more than one-third of the first enlistment sample, but naturally received low training emphasis ratings because of the nature of the tasks.

In addition to the training emphasis data presented in this report, a complete listing of tasks and associated training emphasis ratings will be forwarded to training managers and course development personnel for their use in reviewing present training documents and formal training programs.

Specialty Training Standard (STS)

The 566X0 STS, dated June 1979, was reviewed for the 3-, 5-, and 7-skill level personnel. Subject matter specialists at the Sheppard Technical Training Center assisted in the analysis by matching job inventory tasks to specific STS items. Overall, this document was very comprehensive in its coverage of general training requirements. Although there were some items that were performed by relatively small percentages of personnel, generally the STS was closely supported by the survey data.

Plan of Instruction (POI J3ABR56630)

The current Plan of Instruction for Course J3ABR56630 was also reviewed, and is also largely consistent with the data. One notable exception, however, was found in Block II, objective 7C, which dealt with the implementation of the proper control techniques for stored food pest problems. Overall, the percentages of members performing tasks which were linked to this objective were generally very low. Of the tasks which were performed by 30 percent or more of the first term personnel and rated above average in training emphasis, there were only three which were not referenced to any block. These were: annotate termite and wood decay inspection forms (DD Form 1070), coordinate with building occupants on treatment operations, and drive vehicles during pesticide applications.

TABLE 21

TASKS RATED HIGHEST IN TRAINING EMPHASIS WHICH ARE PERFORMED BY DAFSC 566X0 PERSONNEL

TASKS		TRAINING EMPHASIS	PERCENT MEMBERS PERFORMING (N=124)
F189	PREPARE INSECTICIDE EMULSIONS	7.00	90
F192	PREPARE INSECTICIDE SUSPENSIONS	6.80	63
I286	APPLY OUTDOOR FOGS USING ULTRA LOW VOLUME (ULV) GENERATORS	6.78	48
F173	DISPOSE OF EMPTY PESTICIDE CONTAINERS	6.74	86
F191	PREPARE INSECTICIDE SOLUTIONS	6.74	73
I282	APPLY LIQUID INSECTICIDES USING COMPRESSED AIR SPRAYERS	6.72	86
F175	DISPOSE OF UNUSED PESTICIDE FORMULATIONS	6.56	65
F197	TRANSFER PESTICIDES FROM STORAGE TO DISPERSAL EQUIPMENT	6.48	89
P417	CLEAN HAND EQUIPMENT	6.48	88
F421	INSPECT PERSONAL SAFETY EQUIPMENT	6.30	79
H250	APPLY INSECTICIDES USING SUBSLAB INSECTION UNITS	6.24	40
F193	PREPARE PESTICIDE BAITS	6.22	70
F171	DETERMINE INSECTICIDE APPLICATION METHODS	6.20	74
P419	CLEAN, WASH, AND DRY SAFETY EQUIPMENT	6.20	90
F168	DETERMINE FORMULATIONS AND QUANTITIES OF CHEMICALS REQUIRED FOR PEST CONTROL OPERATIONS	6.17	64
F172	DETERMINE RODENTICIDE APPLICATION METHODS	6.15	70
F195	RESEARCH AFM 91-16 OR OTHER TECHNICAL INSTRUCTIONS FOR PESTICIDE CONTROL RECOMMENDATIONS	6.13	67
F179	MAINTAIN PESTICIDE STORAGE AREAS	6.09	77
I279	APPLY LIQUID INSECTICIDES FOR MOSQUITO LARVAL CONTROL USING HYDRAULIC SPRAYERS	6.09	33
F188	PREPARE INSECTICIDE DUSTS	6.00	54
P418	CLEAN PESTICIDE TANKS OR HOPPERS	6.00	76
F198	TRANSPORT PESTICIDES OR HAND EQUIPMENT	5.98	87
I280	APPLY LIQUID INSECTICIDES ON FLY BREEDING AREAS USING HYDRAULIC SPRAYERS	5.98	35
P420	INSPECT FACILITY SAFETY EQUIPMENT	5.96	55

TABLE 22

TASKS RATED LOWEST IN TRAINING EMPHASIS WHICH ARE PERFORMED BY DAFSC 566X0 PERSONNEL

TASKS		TRAINING EMPHASIS	PERCENT MEMBERS PERFORMING (N=124)
Q498	PERFORM REFUSE COLLECTION OPERATIONS	.09	7
Q495	PERFORM CE JANITORIAL DETAILS	.33	37
A20	DRAFT BUDGET OR FINANCIAL REQUIREMENTS	.33	5
A13	COORDINATE WITH SPECIAL AERIAL SPRAY FLIGHTS (SASF) ON DISSEMINATION OF PESTICIDES	.35	7
R526	PERFORM CAMP CANTONMENT CONSTRUCTION TECHNIQUES	.37	6
E144	DESIGN WORKSHEETS OR MAINTENANCE FORMS	.37	6
Q499	PERFORM SNOW REMOVAL OPERATIONS	.48	10
Q474	AUGMENT SECURITY POLICE	.50	6
C83	EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	.50	6
Q477	DISPATCH CIVIL ENGINEERING EQUIPMENT	.61	5
R514	OPERATE FIELD BATH UNITS	.63	6
C78	ANALYZE STATUS REPORTS TO IMPROVE MANAGEMENT OF RESOURCES	.63	7
B70	MAINTAIN CONTINGENCY PLANS	.63	7
A27	PLAN BRIEFINGS	.65	6
G235	PRESERVE VERTEBRATE SPECIMENS BY TAXIDERMY	.70	7
A36	PREPARE JOB DESCRIPTIONS	.72	10
A1	ASSIGN PERSONNEL TO DUTY POSITIONS	.72	9
Q494	PERFORM BASE CLEANUP	.78	40
Q473	APPLY SMOKE ODOR COUNTERACTANTS	.83	6
C93	EVALUATE UNIT EMERGENCY PLANS	.83	6
A24	PARTICIPATE IN ENVIRONMENTAL COMMITTEE MEETINGS	.83	10
R534	PRACTICE DEMOLITION (BASE DENIAL) TECHNIQUES	.85	5
A32	PLAN SPECIAL ENTOMOLOGICAL PROJECTS OTHER THAN AIRFIELD OR HANGAR VERTEBRATE CONTROL	.85	17
B74	SUPERVISE ENTOMOLOGY SPECIALISTS (AFSC 56650)	.91	6
A18	DEVELOP ORGANIZATIONAL CHARTS	.94	18

ANALYSIS OF CONUS VERSUS OVERSEAS GROUPS

A comparison was made between the tasks performed by DAFSC 56650 personnel stationed within the CONUS and those located overseas. Table 23 lists those tasks which best differentiate between CONUS and overseas groups. Overall, the data revealed that the jobs performed by both groups were virtually identical in nature.

However, a number of minor variations did exist. Respondents who were stationed in the CONUS reported performing a slightly larger number of tasks (141) than those who were overseas (128), while the overseas incumbents had a greater average number of months TAFMS (82 versus 58). Although there were no significant task differences, a larger percentage of overseas respondents reported spending time on administrative and supervisory tasks than their counterparts in the CONUS. This may be a reflection of the fact that the overseas personnel had a higher average paygrade (4.5) than those assigned within the CONUS (3.9).

Comparisons were also made across individual geographic areas in order to determine if the tasks performed changed as a function of duty location. However, no significant differences were found.

TABLE 23

TASKS WHICH BEST DIFFERENTIATE DAFSC 56650
CONUS AND OVERSEAS PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		CONUS (N=109)	OVERSEAS (N=35)	DIFFERENCE
R536	PREPARE PERSONAL CLOTHING AND EQUIPMENT FOR DEPLOYMENT	69	20	+49
R505	FIRE M-16 RIFLES	82	49	+33
J303	DISPOSE OF DEAD ANIMALS	90	57	+33
P440	OPERATIONALLY CHECK ULV GENERATORS	66	34	+32
J311	PICK UP OR TRANSPORT DEAD ANIMALS	83	54	+29
H257	INSPECT TERMITE SHIELDS	49	20	+29
I270	APPLY LIQUID INSECTICIDES FOR ADULT FLYING INSECT CONTROL USING BUFFALO TURBINES	37	9	+28
L354	APPLY DISINFECTANTS OR DEODORANTS	37	9	+28
I279	APPLY LIQUID INSECTICIDES FOR MOSQUITO LARVAL CONTROL USING HYDRAULIC SPRAYERS	39	11	+28
N390	APPLY LIQUID HERBICIDES TO GROUND SURFACES USING COMPRESSED AIR SPRAYERS	36	9	+27
H245	APPLY INSECTICIDES BY LONG OR SHORT RODDING	38	11	+27
H254	CLEAN UP AFTER TERMITE CONTROL OPERATIONS	52	26	+26
E166	TYPE CORRESPONDENCE, RECORDS, OR REPORTS	10	40	-30
E153	MAINTAIN EQUIPMENT ACCOUNT RECORDS	13	40	-27
E161	PREPARE PEST CONTROL SUMMARY REPORT FORMS (DD FORM 1532)	22	46	-24
E130	ANNOTATE BASE PEST ERROR AUDIT LISTING FORMS	8	31	-23
E140	COMPLETE MATERIALS AND EQUIPMENT LIST FORMS (AF FORM 1445)	28	51	-23
C 94	EVALUATE WORK SCHEDULES	20	43	-23
B 55	CONDUCT SHOP OR UNIT MEETINGS	27	49	-22
E164	PREPARE TRANSCRIPT FOR PEST REPORT FORMS (AF FORM 290)	30	51	-21
B 74	SUPERVISE ENTOMOLOGY SPECIALISTS (AFSC 56650)	22	43	-21
E155	MAINTAIN REPORTS OR RECORDS FROM INSPECTION SURVEILLANCE	16	37	-21
A 42	RECOMMEND INSECT CONTROL MEASURES	66	86	-20
E135	ANNOTATE OPERATOR'S INSPECTION GUIDE AND TROUBLE REPORT FORMS (AFTO FORM 374)	41	60	-19

BIRD AIR STRIKE HAZARD (BASH) CONTROL

In response to the frequent dangers that flocks of wild birds pose to low flying aircraft, special interest has been stimulated in a program to reduce the chances of bird air strike hazards (BASH) for Air Force personnel. Consequently, a thorough analysis of the survey data was required in order to determine if substantial numbers of career ladder incumbents perform tasks which are designed to reduce these hazards, and to identify those tasks which are most commonly performed.

Data comparisons were made across geographic areas, DAFSC, and TAFMS groups. All comparisons indicated that within the career ladder, there were very few BASH tasks that were performed by at least 30 percent or more of the incumbents at either the 3-, 5-, or 7-skill levels (see Table 24).

Although the majority of the BASH tasks deal with the collection, identification, and control of birds directly, there were also a small number of rodent control tasks being performed which may indirectly affect the size of some local bird populations around hangars and airfields by substantially reducing a potential food supply (see Table 24).

Geographical Differences

Although those tasks listed in Table 24 also emerged as the most commonly performed BASH tasks when the survey data was compared across geographical areas, some minor variations were noted among the different locations. For example, smaller percentages of respondents assigned to duty stations in the northwestern United States reported performing those tasks which involve the surveillance and control of birds directly. In addition, smaller percentages of incumbents in the southeastern United States and the Pacific and Alaskan theaters performed both the bird and rodent control functions. However, no substantial differences in the overall time spent on these tasks were noted.

TABLE 24

MOST COMMONLY PERFORMED BASH TASKS
(PERCENT MEMBERS PERFORMING)

TASKS		566X0 PERSONNEL (N=248)	56630 PERSONNEL (N=51)	56650 PERSONNEL (N=144)	56670 PERSONNEL (N=50)
K350	SURVEY AIRFIELDS OR HANGARS FOR PEST BIRD OR RODENT PROBLEMS	37	29	37	46
K321	COLLECT DEAD VERTEBRATES FROM AIRFIELDS OR HANGARS	34	41	34	28
K329	PLACE OR INSPECT POISON BIRD BAITS AT HANGARS	28	25	31	26
K322	CONSULT WITH OTHER FEDERAL, LOCAL, OR STATE AGENCIES FOR BIRD AND RODENT CONTROL METHODS	24	14	22	42
K325	IDENTIFY BIRDS FREQUENTING AIRFIELDS OR HANGERS	24	12	26	32
	INDIRECT INFLUENCES				
K331	PLACE OR INSPECT RODENT BAITS AT HANGARS	50	39	54	50
K333	PLACE OR INSPECT RODENT TRAPS AT HANGARS	41	41	42	38
K332	PLACE OR INSPECT RODENT BAITS ON AIRFIELDS	29	27	31	24

DISCUSSION OF BACKGROUND INFORMATION

In addition to task information, general biographical information as well as some specific information requested by functional managers and technical school representatives was collected. The following discussion presents this type of information.

Of those responding to the survey, 18 percent reported they had completed a formal pest control training program outside of the Air Force. As expected, the percentages increased as the skill levels increased. Percentages of respondents by skill level completing such courses were as follows: 3-skill level (12 percent); 5-skill level (15 percent); and 7-skill level (34 percent).

Concerning MAJCOM pest control certification, only 30 percent of the 566X0 respondents were not certified. Generally, for all areas, the percentage of respondents holding MAJCOM pest control certification increased as skill levels increased. Areas of MAJCOM pest control certification that at least 30 percent of the respondents reported holding were the following: Industrial, Institutional, Structural, and Health Related Pest Control; Ornamental and Turf Pest Control; Public Health Pest Control; and, Agricultural Pest Control, Animal. However, 78 percent of all respondents reported that they did not posses state pest control certifications.

In the 566X0 career ladder, personnel characteristically operate vehicles during the application of pesticides or herbicides as well as when transporting equipment and supplies to the work sites. Vehicles which were used by at least 30 percent of the respondents were one-half ton cargo trucks, farm tractors, and telephone maintenance trucks. Also, because of the concern for safety of the job incumbents, the question was asked whether or not an air conditioner was located in each of the vehicles used during the application of pesticides. Only six percent of the survey respondents answered this question affirmatively.

Table 25 lists the equipment items other than safety equipment used by at least 30 percent of the 566X0 job incumbents. A comparison across 3-, 5-, and 7-skill level incumbents revealed only minor differences in equipment utilization between the skill levels. In most cases, the percentages of personnel using a particular piece of equipment were relatively similar across all skill levels. In addition, respondents were asked to indicate the safety equipment they used on their present job. Table 26 illustrates the safety equipment used by at least 30 percent of the respondents. Of all safety equipment items listed in the inventory, only two items, hip boots and leaching pits, were not used by at least 30 percent of the sample.

Although the types of pesticides and herbicides used by 566X0 incumbents continually change as the environment changes and new chemicals are produced, some experienced entomologists compiled a list of 81 pesticides and herbicides which were considered to be used by a significant number of personnel. Of these 81 pesticides, only 18 were used by at least 30 percent of the respondents (see Table 27). Upon comparison of pesticides and herbicides used by personnel in all skill levels, results, in general, indicated

no distinct differences. However, although the percentages were similar, some experienced entomologists stated that according to their experience, most 3-skill level personnel would use some of the extremely toxic materials, generally fumigants or herbicides, only under the direct supervision of certified 5- or 7-skill level personnel. However, since only extremely small percentages of respondents in all skill levels indicated they used these toxic materials, the data did not differentiate between the groups.

TABLE 25

EQUIPMENT USED BY 30 PERCENT OR MORE OF THE TOTAL SAMPLE

EQUIPMENT	TOTAL SAMPLE
AEROSOL BOMBS	93
COMPRESSED AIR SPRAYERS	92
HAND TOOLS	89
LADDERS	80
SNAP TRAPS	80
MIXING EQUIPMENT	77
LIVE ANIMAL TRAPS	74
HYDRAULIC SPRAYERS (TRAILER MOUNTED)	73
ULV GENERATORS	71
BULB DUSTERS	68
CLOTHES DRYERS	68
WASHING MACHINES	68
MICROSCOPES	56
ELECTRIC MISTERS	55
HYDRAULIC SPRAYERS (FRAME MOUNTED)	54
HAND DUSTERS (EXCEPT BULB TYPE)	51
BALANCE SCALES	49
GRANULE SPREADERS	49
SUBSLAB INJECTORS	49
BUFFALO TURBINES	48
HAND PLUNGER DUSTERS	46
SPECIMEN DISPLAY CASES	45
GRADUATED CYLINDERS	44
FOOT PUMP DUSTERS	43
ROTO-HAMMERS	43
GOPHER TRAPS	42
MECHANICAL AEROSOL GENERATORS (COLD FOGGERS OR NONTHERMAL FOGGERS)	42
LIGHT TRAPS	38
ROTARY DUSTERS	36
STEEL TRAPS	36
BACKPACK-MIST-DUST-BLOWERS	34
GLUE TRAPS	32
ELECTRIC FANS	31

TABLE 26

SAFETY EQUIPMENT USED BY 30 PERCENT OR MORE OF THE TOTAL SAMPLE

SAFETY EQUIPMENT	TOTAL SAMPLE
RUBBER GLOVES	98
RESPIRATOR	96
SAFETY SHOES	95
RESPIRATOR CARTRIDGES	94
COVERALLS	93
VENTILATION FANS	91
WARNING SIGNS	91
EMERGENCY SHOWERS	89
EAR PROTECTORS	89
EYE WASHERS	89
GOGGLES	89
RUBBER APRONS	87
HARD HATS	62
GAS MASK	50
SPARK PROOF LIGHTING	49
GAS MASK CANISTERS	49
PERSONAL PROTECTIVE NETTING	36
KNEE TYPE BOOTS	31

TABLE 27

PESTICIDES USED BY 30 PERCENT OR MORE OF THE TOTAL SAMPLE

PESTICIDES	TOTAL SAMPLE
DIAZINON	96
MALATHION	96
BAYGON	90
DURSBAN	87
WARFARIN	80
PYRETHRUM	78
RESMETHRIN	76
DIAZINON DUST	71
CHLORDANE	63
CARBARYL	62
D-PHENOTHRIN	48
FICAM	44
PIVAL	39
ZINC PHOSPHIDE	38
AVITROL	37
2-4-D	33
CALCIUM CYANIDE	33
PARADICHLOROBENZENE	32

COMPARISON TO PREVIOUS SURVEY

The results of this survey were compared to those of Occupational Survey Report, AFPT 90-566-152, dated 20 June 1975. Although the number of job groups reported in these two studies varied somewhat (three clusters in the 1975 study versus two clusters in the present study) and the manner in which the job types grouped together differed slightly, the major job groups identified by the present survey were very similar to those reported earlier. Also, DAFSC, AFMS, and CONUS versus overseas group comparisons revealed similar results for both studies. Overall, jobs within the 566X0 career ladder have remained fairly stable over the past five years. Also, job interest and reenlistment intentions were similar for both samples from the two different time periods. Unless major changes occur within the career field such as a major restructuring with related fields or acquisition of new responsibilities, jobs within the 566X0 career field should remain stable and similar to those reported in the previous and present surveys.

WRITE-IN COMMENTS

At the end of each job inventory, respondents are encouraged to write-in additional information, such as background responses which they were unable to classify in given categories or tasks they perform which did not appear in the inventory. Also, they are given the opportunity to express their attitudes toward or concerns about their career field.

For the 566X0 survey, 52 respondents wrote-in additional information. In general, the majority of their comments related to background information which they were unable to classify. The background question receiving the most write-in comments concerned completion of formal pest control training programs outside of the Air Force (question #19). Some typical write-in comments addressing this background question included completion of a disease vector course from Jacksonsville Naval Air Station and other pest control courses from universities such as the University of Pennsylvania and Purdue University. Two other background questions recieving some comments were related to MAJCOM certification (question #25) and vehicle operation (question #28).

Only a small number of respondents listed tasks they performed which did not appear in the job inventory. None of the write-in tasks occurred with any regularity, and consequently appear to be performed by individuals with unique jobs.

In addition, only two respondents expressed general opinions or feelings concerning their career field. In general, their comments were negative. They were dissatisfied with the scope of the work which they were performing.

IMPLICATIONS

The 566X0 career ladder has been, and continues to be, a highly stable AFSC. Athough there are a constant number of small changes being made in procedures as a result of new pesticides being adopted in order to meet the needs of a constantly changing environment, the basic knowledge and skills required for this specialty remain relatively constant. Among all groups within this AFSC, there were a very large number of common technical tasks which were performed. Overall, this seems to be a very technically oriented career field.

It has also been noted that although incumbents in the Entomology AFSC deal with a wide variety of pest problems, these personnel do not spend a large portion of their time in the performance of tasks related to the control of bird air strike hazards. Consequently, only a very limited number of such tasks are performed by substantial percentages of personnel. Control of pests such as insects and domestic rodents have characteristically accounted for a greater percentage of time on the job.

Currently, there appears to be no major problems involving the 566X0 career ladder. In addition, job interest and perceived utilization of talents and training was characteristically very high. In view of this, no major changes in classification or training have been recommended.

APPENDIX A

REPRESENTATIVE TASKS PERFORMED BY CLUSTER AND JOB TYPE GROUPS

REPRESENTATIVE TASKS PERFORMED BY
SENIOR ENTOMOLOGISTS (GRP034, N=134)

TASKS		PERCENT MEMBERS PERFORMING
F171	DETERMINE INSECTICIDE APPLICATION METHODS	96
P421	INSPECT PERSONAL SAFETY EQUIPMENT	94
F189	PREPARE INSECTICIDE EMULSIONS	94
F176	INVENTORY PESTICIDES	94
A42	RECOMMEND INSECT CONTROL MEASURES	93
F172	DETERMINE RODENTICIDE APPLICATION METHODS	93
A45	RECOMMEND RODENT CONTROL MEASURES	93
I282	APPLY LIQUID INSECTICIDES USING COMPRESSED AIR SPRAYERS	92
A50	SCHEDULE OCCUPIED QUARTERS SPRAYING	92
G215	IDENTIFY DOMESTIC RODENTS	92
P419	CLEAN, WASH, AND DRY SAFETY EQUIPMENT	91
F197	TRANSFER PESTICIDES FROM STORAGE TO DISPERSAL EQUIPMENT	91
P417	CLEAN HAND EQUIPMENT	91
A8	COORDINATE WITH BUILDING OCCUPANTS ON TREATMENT OPERATIONS	90
F168	DETERMINE FORMULATIONS AND QUANTITIES OF CHEMICALS REQUIRED FOR PEST CONTROL OPERATIONS	90
F198	TRANSPORT PESTICIDES OR HAND EQUIPMENT	90
F195	RESEARCH AFM 91-16 OR OTHER TECHNICAL INSTRUCTIONS FOR PESTICIDE CONTROL RECOMMENDATIONS	90
B69	INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	90
F173	DISPOSE OF EMPTY PESTICIDE CONTAINERS	90
G220	INSPECT FOR DOMESTIC RODENT INFESTATION	90
I294	EVALUATE EFFECTIVENESS OF INSECTICIDE APPLICATIONS	89
F179	MAINTAIN PESTICIDE STORAGE AREAS	89
P418	CLEAN PESTICIDE TANKS OR HOPPERS	88
C87	EVALUATE PEST INFESTATIONS	87
P471	REMOVE OR REPLACE COMPONENTS OF PERSONAL SAFETY EQUIPMENT	87

REPRESENTATIVE TASKS PERFORMED BY
ENTOMOLOGY NCOICs (GRP072, N=16)

TASKS		PERCENT MEMBERS PERFORMING
A50	SCHEDULE OCCUPIED QUARTERS SPRAYING	100
A42	RECOMMEND INSECT CONTROL MEASURES	100
A8	COORDINATE WITH BUILDING OCCUPANTS ON TREATMENT OPERATIONS	100
A45	RECOMMEND RODENT CONTROL MEASURES	100
A17	DETERMINE WORK PRIORITIES	100
B62	IMPLEMENT BASE PEST CONTROL PLANS	100
C87	EVALUATE PEST INFESTATIONS	100
B74	SUPERVISE ENTOMOLOGY SPECIALISTS (AFSC 56650)	100
A48	REVIEW PEST CONTROL REPORTS	100
C101	PREPARE APRs	100
C99	INSPECT PESTICIDE STORAGE AREAS	100
C98	INSPECT EQUIPMENT STORAGE AREAS	100
A14	COORDINATE WORK ACTIVITIES WITH OTHER CIVIL ENGINEERING (CE) SHOPS	100
B64	IMPLEMENT SAFETY PROGRAMS	94
A33	PLAN WORK ASSIGNMENTS	94
A54	SCHEDULE VACANT QUARTERS SPRAYING	94
B68	INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	94
F195	RESEARCH AFM 91-16 OR OTHER TECHNICAL INSTRUCTIONS FOR PESTICIDE CONTROL RECOMMENDATIONS	94
F168	DETERMINE FORMULATIONS AND QUANTITIES OF CHEMICALS REQUIRED FOR PEST CONTROL OPERATIONS	94
C82	EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	94
A34	PREPARE ANNUAL BASE PEST CONTROL PLANS	94
B71	PREPARE REQUISITIONS FOR PESTICIDES	94
A52	SCHEDULE PERIODIC RODENT INSPECTIONS	94
B61	DIRECT UTILIZATION OF EQUIPMENT	94
A46	RECOMMEND RODENT PROOFING MEASURES	94

REPRESENTATIVE TASKS PERFORMED BY
ENTOMOLOGY TECHNICIAN-SUPERVISORS
(SPC042, N=115)

TASKS		PERCENT MEMBERS PERFORMING
P419	CLEAN, WASH, AND DRY SAFETY EQUIPMENT	99
I282	APPLY LIQUID INSECTICIDES USING COMPRESSED AIR SPRAYERS	97
F171	DETERMINE INSECTICIDE APPLICATION METHODS	97
F189	PREPARE INSECTICIDE EMULSIONS	97
P417	CLEAN HAND EQUIPMENT	97
P418	CLEAN PESTICIDE TANKS OR HOPPERS	97
P421	INSPECT PERSONAL SAFETY EQUIPMENT	96
F198	TRANSPORT PESTICIDES OR HAND EQUIPMENT	96
F197	TRANSFER PESTICIDES FROM STORAGE TO DISPERSAL EQUIPMENT	96
F172	DETERMINE RODENTICIDE APPLICATION METHODS	95
F176	INVENTORY PESTICIDES	95
P471	REMOVE OR REPLACE COMPONENTS OF PERSONAL SAFETY EQUIPMENT	95
G215	IDENTIFY DOMESTIC RODENTS	95
P470	REMOVE OR REPLACE COMPONENTS OF HAND EQUIPMENT	94
G220	INSPECT FOR DOMESTIC RODENT INFESTATION	94
F179	MAINTAIN PESTICIDE STORAGE AREAS	93
F173	DISPOSE OF EMPTY PESTICIDE CONTAINERS	93
P458	PERFORM OPERATOR MAINTENANCE ON PERSONAL SAFETY EQUIPMENT	93
A45	RECOMMEND RODENT CONTROL MEASURES	93
P468	PREPARE ENTOMOLOGY EQUIPMENT FOR STORAGE	93
A42	RECOMMEND INSECT CONTROL MEASURES	92
P418	EVALUATE EFFECTIVENESS OF INSECTICIDE APPLICATIONS	92
B69	INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	92
A50	SCHEDULE OCCUPIED QUARTERS SPRAYING	91
F168	DETERMINE FORMULATIONS AND QUANTITIES OF CHEMICALS REQUIRED FOR PEST CONTROL OPERATIONS	91

REPRESENTATIVE TASKS PERFORMED BY
JUNIOR ENTOMOLOGISTS
(GRP028, N=78)

TASKS		PERCENT MEMBERS PERFORMING
F197	TRANSFER PESTICIDES FROM STORAGE TO DISPERSAL EQUIPMENT	95
F189	PREPARE INSECTICIDE EMULSIONS	94
P419	CLEAN, WASH, AND DRY SAFETY EQUIPMENT	91
F173	DISPOSE OF EMPTY PESTICIDE CONTAINERS	91
F198	TRANSPORT PESTICIDES OR HAND EQUIPMENT	90
I282	APPLY LIQUID INSECTICIDES USING COMPRESSED AIR SPRAYERS	89
F177	LOAD OR UNLOAD PESTICIDES ONTO OR FROM VEHICLES	86
P417	CLEAN HAND EQUIPMENT	85
J303	DISPOSE OF DEAD ANIMALS	85
F195	RESEARCH AFM 91-16 OR OTHER TECHNICAL INSTRUCTIONS FOR PESTICIDE CONTROL RECOMMENDATIONS	80
J311	PICK UP OR TRANSPORT DEAD ANIMALS	79
P471	REMOVE OR REPLACE COMPONENTS OF PERSONAL SAFETY EQUIPMENT	78
P470	REMOVE OR REPLACE COMPONENTS OF HAND EQUIPMENT	78
F179	MAINTAIN PESTICIDE STORAGE AREAS	76
F171	DETERMINE INSECTICIDE APPLICATION METHODS	75
G215	IDENTIFY DOMESTIC RODENTS	75
P421	INSPECT PERSONAL SAFETY EQUIPMENT	74
P418	CLEAN PESTICIDE TANKS OR HOPPERS	72
Q479	DRIVE VEHICLES DURING PESTICIDE APPLICATION	69
G217	IDENTIFY FIELD RODENTS	69
G220	INSPECT FOR DOMESTIC RODENT INFESTATION	69
F191	PREPARE INSECTICIDE SOLUTIONS	68
P458	PERFORM OPERATOR MAINTENANCE ON PERSONAL SAFETY EQUIPMENT	67
F193	PREPARE PESTICIDE BAITS	65
F172	DETERMINE RODENTICIDE APPLICATION METHODS	64

REPRESENTATIVE TASKS PERFORMED BY
GENERAL ENTOMOLOGIST
SPC043 (GRP030 AND GRP024)
(N=69)

TASKS		PERCENT MEMBERS PERFORMING
F173	DISPOSE OF EMPTY PESTICIDE CONTAINERS	94
F189	PREPARE INSECTICIDE EMULSIONS	93
F197	TRANSFER PESTICIDES FROM STORAGE TO DISPERSAL EQUIPMENT	93
I282	APPLY LIQUID INSECTICIDES USING COMPRESSED AIR SPRAYERS	93
F198	TRANSPORT PESTICIDES OR HAND EQUIPMENT	91
P419	CLEAN, WASH, AND DRY SAFETY FQUIPMENT	90
F177	LOAD OR UNLOAD PESTICIDES ONTO OR FROM VEHICLES	89
P471	REMOVE OR REPLACE COMPONENTS OF PERSONAL SAFETY EQUIPMENT	88
P417	CLEAN HAND EQUIPMENT	87
J303	DISPOSE OF DEAD ANIMALS	86
P470	REMOVE OR REPLACE COMPONENTS OF HAND EQUIPMENT	84
J311	PICK UP OR TRANSPORT DEAD ANIMALS	80
F195	RESEARCH AFM 91-16 OR OTHER TECHNICAL INSTRUCTIONS FOR PESTICIDE CONTROL RECOMMENDATIONS	78
F171	DETERMINE INSECTICIDE APPLICATION METHODS	76
F179	MAINTAIN PESTICIDE STORAGE AREAS	76
P418	CLEAN PESTICIDE TANKS OR HOPPERS	74
P421	INSPECT PERSONAL SAFETY EQUIPMENT	73
Q479	DRIVE VEHICLES DURING PESTICIDE APPLICATION	71
P458	PERFORM OPERATOR MAINTENANCE ON PERSONAL SAFETY EQUIPMENT	70
F175	DISPOSE OF UNUSED PESTICIDE FORMULATIONS	65
G220	INSPECT FOR DOMESTIC RODENT INFESTATION	65
J289	CLEAN UP AFTER INSECT CONTROL OPERATIONS	62
J314	PLACE OR INSPECT RODENT TRAPS OTHER THAN AT HANGARS OR AIRFIELDS	61
F192	PREPARE INSECTICIDE SUSPENSIONS	58
F176	INVENTORY PESTICIDES	53

REPRESENTATIVE TASKS PERFORMED BY
COLLECTION AND IDENTIFICATION PERSONNEL
(GRP036, N=9)

TASKS		PERCENT MEMBERS PERFORMING
F189	PREPARE INSECTICIDE EMULSIONS	100
P419	CLEAN, WASH, AND DRY SAFETY EQUIPMENT	100
G201	COLLECT HOUSEHOLD PESTS SUCH AS, ANTS, CRICKETS, SILVERFISH, OR COCKROACHES	100
F191	PREPARE INSECTICIDE SOLUTIONS	100
G217	IDENTIFY FIELD RODENTS	100
G216	IDENTIFY ECTOPARASITES	100
G213	IDENTIFY REPTILES	89
G214	IDENTIFY ARTHROPODS	89
G215	IDENTIFY DOMESTIC RODENTS	89
F197	TRANSFER PESTICIDES FROM STORAGE TO DISPERSAL EQUIPMENT	89
P421	INSPECT PERSONAL SAFETY EQUIPMENT	89
P417	CLEAN HAND EQUIPMENT	89
A8	COORDINATE WITH BUILDING OCCUPANTS ON TREATMENT OPERATIONS	89
F195	RESEARCH AFM 91-16 OR OTHER TECHNICAL INSTRUCTIONS FOR PESTICIDE CONTROL RECOMMENDATIONS	89
G203	COLLECT MOSQUITO LARVAE	89
F188	PREPARE INSECTICIDE DUSTS	89
I264	APPLY DUST OR GRANULAR INSECTICIDES INDOORS USING HAND EQUIPMENT	89
G220	INSPECT FOR DOMESTIC RODENT INFESTATION	89
F198	TRANSPORT PESTICIDES OR HAND EQUIPMENT	78
G219	IDENTIFY VEGETATION	78
F172	DETERMINE RODENTICIDE APPLICATION METHODS	78
F179	MAINTAIN PESTICIDE STORAGE AREAS	78
J303	DISPOSE OF DEAD ANIMALS	78
G207	COLLECT STRUCTURAL PESTS	78
G208	COLLECT VENOMOUS ARTHROPODS	78

REPRESENTATIVE TASKS PERFORMED BY
TERMITE AND INSECT CONTROL PERSONNEL
(GRP043, N=5)

TASKS		PERCENT MEMBERS PERFORMING
F189	PREPARE INSECTICIDE EMULSIONS	100
I282	APPLY LIQUID INSECTICIDES USING COMPRESSED AIR SPRAYERS	100
I286	APPLY OUTDOOR FOGS USING ULTRA LOW VOLUME (ULV) GENERATORS	100
F197	TRANSFER PESTICIDES FROM STORAGE TO DISPERSAL EQUIPMENT	100
F192	PREPARE INSECTICIDE SUSPENSIONS	100
H256	INJECT LIQUID FORMULATIONS INTO DRY WOOD TERMITE GALLERIES	100
H255	DRILL CONCRETE SLABS USING POWERED HAMMERS OR ROTO HAMMERS	100
H250	APPLY INSECTICIDES USING SUBSLAB INJECTION UNITS	100
F172	DETERMINE RODENTICIDE APPLICATION METHODS	100
P470	REMOVE OR REPLACE COMPONENTS OF HAND EQUIPMENT	100
F171	DETERMINE INSECTICIDE APPLICATION METHODS	80
I283	APPLY LIQUID INSECTICIDES USING PISTOL SPRAYERS	80
F177	LOAD OR UNLOAD PESTICIDES ONTO OR FROM VEHICLES	80
F175	DISPOSE OF UNUSED PESTICIDE FORMULATIONS	80
P417	CLEAN HAND EQUIPMENT	80
H249	APPLY INSECTICIDES TO UNTREATED LUMBER	80
F195	RESEARCH AFM 91-16 OR OTHER TECHNICAL INSTRUCTIONS FOR PESTICIDE CONTROL RECOMMENDATIONS	80
F168	DETERMINE FORMULATIONS AND QUANTITIES OF CHEMICALS REQUIRED FOR PEST CONTROL OPERATIONS	60
F191	PREPARE INSECTICIDE SOLUTIONS	60
R502	DON CHEMICAL WARFARE PERSONAL PROTECTIVE CLOTHING	60
F173	DISPOSE OF EMPTY PESTICIDE CONTAINERS	60
R516	OPERATE INSECTICIDE SPRAYERS OR FOGGERS	40
E131	ANNOTATE BCE JOB ORDER RECORD FORMS (AF FORM 1879)	40
H258	PATCH HOLES IN CONCRETE SLABS OR BUILDING FOUNDATIONS	40
H254	CLEAN UP AFTER TERMITE CONTROL OPERATIONS	40


DATE
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