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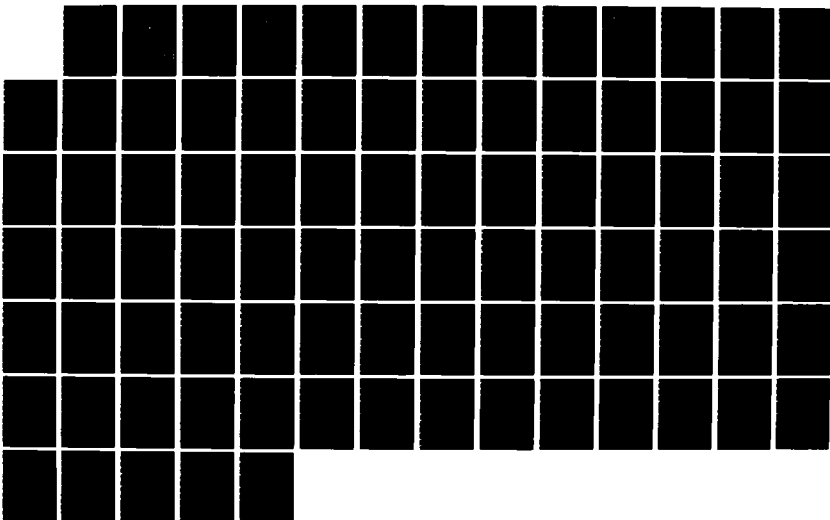
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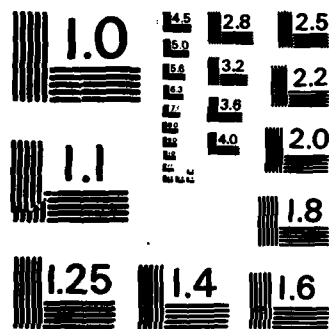
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# AIR COMMAND AND STAFF COLLEGE

## STUDENT REPORT

Job Attitudes  
of

Air Force Plant Representative Office  
(AFPRO) Personnel

Major David L. Mastin

86-1625

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**REPORT NUMBER** 86-1625

**TITLE** JOE ATTITUDES OF AIR FORCE PLANT REPRESENTATIVE OFFICE  
(AFPRO) PERSONNEL

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Submitted to the faculty in partial fulfillment of  
requirements for graduation.

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| <p>This paper is an analysis of the Leadership and Management Development Center's Organizational Assessment Package (OAP) data comparing three groups: Air Force Contract Management Division's Air Force Plant Representative Office (AFPRO) personnel, Air Force Systems Command (AFSC) personnel, and Air Force data base personnel. The data were limited to officer and civilian personnel assigned within the continental United States. The analysis includes discussion of 18 attitudinal factors and 22 demographic variables. The results indicated AFPRO personnel have consistently less positive attitudinal perceptions than either AFSC personnel or Air Force data base personnel.</p> |                                          |                                                                                                                                      |                             |
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## PREFACE

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Job attitudes of military and civilian personnel are an important part of retaining personnel in both federal service and specific jobs. A person's job attitude is made up of many factors, and the comparison of those factors can help us better understand why a person or group of people are either more or less satisfied than another group.

This study was to see if there were significant differences in job attitudes among Air Force Contract Management Division personnel assigned to Air Force Plant Representative Offices, the rest of Air Force Systems Command personnel, and the remainder of Air Force personnel. Then, if there were differences, the study attempted to explain them.

The data used for this study is currently maintained by the Leadership and Management Development Center's (LMDC) Directorate of Research & Analysis at Maxwell AFB AL. However, before the end of 1986, the data will be transferred to the Air Force Human Resources Laboratory at Brooks AFB TX.

The format followed for this study was the Publication Manual of the American Psychological Association, with minor variations to meet LMDC's requirements. In addition, in the interest of brevity, the pronoun "he" was used in all discussions rather than the more cumbersome "he/she" although female personnel were an important part of the data.

The author is indebted to Major Mickey R. Dansby and Captain Richard H. Brown, Leadership and Management Development Center, Directorate of Research & Analysis, for their guidance and technical assistance.



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## ABOUT THE AUTHOR

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Major David L. Mastin has served in a wide variety of assignments in three career fields. He began his military career in 1972 as a missile launch officer at Whiteman AFB, Missouri in the Minuteman II weapon system. This was followed by an Air Force Institute of Technology Education With Industry assignment in 1977 to Rockwell International, Anaheim, California. After this training, Major Mastin was assigned to Detachment 46, Air Force Plant Representative Office TRW, Redondo Beach, California in 1978 as an Industrial Engineer and then in 1979 as the Manufacturing Division Chief. In 1981 he was assigned to Space Division, Los Angeles AFS, California as the Executive Officer to the Deputy for Contracting and subsequently in 1982 as a Systems Contract Negotiator on the Defense Support Program. In 1983 Major Mastin was transferred to Squadron Officer School at Maxwell AFB, Alabama where he was a Section Commander, Wing Chief, and Communications Skills Branch Chief.

Major Mastin received a Bachelor of Science degree in Engineering Management from the United States Air Force Academy in 1972. He also received a Master of Business Administration degree in Business Administration and Management from the University of Missouri in 1976 through the Minuteman Education Program. His military education includes Air Command and Staff College in residence and Squadron Officer School, where he was a distinguished graduate.

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## EXECUTIVE SUMMARY

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**REPORT NUMBER** 86-1625

**AUTHOR(S)** MAJOR DAVID L. NASTIN, USAF

**TITLE** JOB ATTITUDES OF AIR FORCE PLANT REPRESENTATIVE OFFICE (AFPRO) PERSONNEL

I. Purpose: To determine if there are significant differences in job attitudes for personnel in Air Force Plant Representative Offices (AFPRO) as compared to other personnel in Air Force Systems Command (AFSC) and to other Air Force personnel.

II. Procedure: Three steps were taken to meet the purpose of this study:

(1) A literature review was conducted on major theories and current research on organizational behavior and job satisfaction. This was done to develop a basis to explain any significant differences found during the analysis of the data. For instance, Herzberg's two-factor theory discussed hygiene factors as environmental such as policies, working conditions, money, and security. These tend to eliminate dissatisfaction but do not motivate workers. Herzberg also discussed motivators such as recognition for accomplishment, increased responsibility, and professional growth and development and said these will motivate workers if the workers are otherwise satisfied through hygiene factors. He went on to say that using job enrichment to upgrade a person's responsibility, growth, and challenge of the job is the best motivator of all.

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(2) Analyses were undertaken on both the demographic and attitudinal data of the three groups from the Air Force Leadership and Management Development Center's (LMDC) Organizational Assessment Package (OAP) survey. Statistical analyses of the data were conducted using standard inferential statistics (Analysis of Variance with Newman-Keuls follow-up) at the 95% confidence level.

(3) An interpretation of the factors having significant statistical differences among groups was then accomplished using the literature review and the author's experience as a basis for the explanation of the differences.

III. Data: The data for the analyses were taken from the LMDC's OAP data base and included 570 AFPRO respondents (37 officers and 533 civil service) from three AFPROs: Hughes, El Segundo, California; Aerojet, Sacramento, California; and Rockwell, North American Aircraft Operations, Los Angeles, California (including Palmdale and Columbus). There were 6,040 AFSC respondents (1,890 officers and 4,150 civilians) and 30,710 Air Force respondents (10,700 officers and 20,010 civilians). Only data collected from 1 October 1981 to 16 September 1985 and from respondents stationed within the continental United States were used. In addition, enlisted personnel were not considered due to their small number in AFPROs.

IV. Findings: The statistical analyses indicated AFPRO personnel expressed significantly less positive job attitudes than AFSC and Air Force personnel. Specifically, AFPRO personnel were statistically significantly lower on 9 of the 18 factors when compared with AFSC personnel. These factors were Task Characteristics, Job Related Training, Management and Supervision, Work Group Effectiveness, General Organizational Climate, Skill Variety, Task Significance, Job Feedback, and Need for Enrichment Index. AFPRO personnel were also statistically significantly lower on 11 of the 18 factors when compared with Air Force personnel. These factors were Job Performance Goals, Task Characteristics, Job Related Training, Organizational Communications Climate, Pride, Work Group Effectiveness, General Organizational Climate, Skill Variety, Task Identity, Task Significance, and Job Feedback. AFPRO

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## CONTINUED

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personnel were significantly more positive compared to Air Force personnel on only one factor: Need for Enrichment Index. AFPRO personnel were not significantly more positive than AFSC personnel on any factors.

U. Recommendations: To help increase AFPRO personnel's job attitudes, AFCMD leadership could:

(1) Continue their current initiatives to increase the stature of AFCMD in the eyes of AFSC and the Air Force.

(2) Focus more on motivators than hygiene factors in future initiatives.

(3) Look into the feasibility of additional job enrichment for their personnel.

(4) Upgrade local AFPRO training programs.

(5) Ensure personnel fully understand AFCMD's mission and how it fits into the overall posture of our national defense.

## Chapter One

### INTRODUCTION

The purpose of this study is to provide the Air Force Contract Management Division (AFCMD) an analysis of the Leadership and Management Development Center's (LMDC) Organizational Assessment Package (OAP) survey data. This analysis compares results from OAP surveys for three groups to assist AFCMD leaders in identifying overall attitudinal strengths and potential personnel problem areas. Group 1 consists of AFCMD personnel; Group 2 is comprised of other Air Force Systems Command (AFSC) personnel; and Group 3 consists of other Air Force personnel surveyed by LMDC. The analyses consider attitudes of officers and civilian personnel within the three groups. Excluded from the analyses are enlisted personnel data due to the small numbers at AFCMD detachments.

Why should we be concerned about studying job attitudes in today's Air Force? As Lawrence J. Korb (1985), Assistant Secretary of Defense, Manpower, Installations and Logistics, points out, we cannot become complacent about our improved manpower situation. As a matter of fact, the Air Force retention rates peaked three years ago and have gradually declined since then. In addition, the military-age population in the United States will be 15% smaller by 1990 than it was in

1980 (Correll, 1985). One way of lessening the impact of fewer potential recruits is to maintain high retention levels through increased job satisfaction.

AFCMD's personnel (specialists in engineering, contracting, manufacturing, subcontracts, quality assurance, and program management) are all located in contractor facilities and are all in relatively high demand in the defense contractor community. Because of this fact, AFCMD needs to be especially concerned with retention through increased job satisfaction. According to Richard A. Wheatt (personal communication, December 19, 1985), Special Assistant to the AFCMD Commander, in 1984 AFCMD had an average civilian personnel turnover rate of 25%. However, in the Los Angeles area, where there are seven of the twenty-four Air Force Plant Representative Offices (AFPROs), the average civilian turnover rate was 32%.

Since the CAP survey plays such an important part in this study, a brief discussion of the survey's history is appropriate. The idea for the survey originated in 1973 with the beginning of the all volunteer force (Short, 1985). In an effort to understand what makes the Air Force attractive, General David C. Jones (then Air Force Chief of Staff) established the Air Force Management Improvement Group (AFMIG) in 1975 to study the non-technical aspects of Air Force life. The results of AFMIG surveys indicated a need for leadership and management training. LMDC was created to fill this need.

Subsequently, the OAP survey was developed jointly by LMDC and the Air Force Human Resources Laboratory to help LMDC meet its mission. The LMDC survey format was based on the situational approach to leadership and management. In addition, the survey was designed to (a) help identify organizational leadership/management strengths and weaknesses, (b) provide feedback to Air Force Professional Military Education schools, and (c) provide a data base in support of Air Force-wide organizational effectiveness research efforts (Short, 1985). The ultimate goal of LMDC is to use the survey data to improve Air Force leadership/management and thereby increase motivation and productivity (Mahr, 1982). Over the years, the survey has evolved into a 109-item booklet (discussed in more detail in Chapter Three).

In order to better understand the OAP results for AFCMD and AFSC, one needs some appreciation of the scope of these organizations. AFCMD, headquartered at Kirtland Air Force Base, New Mexico, is part of AFSC and at the same organizational level as the four product divisions: Space Division, Aeronautical Systems Division, Electronic Systems Division, and the Armament Division. Its mission is to perform contract administration at all contractor plants assigned to the Air Force under the Department of Defense Plant Cognizance Program (USAF, 1984). Most of AFCMD's personnel are assigned to AFPROs located at assigned contractor facilities where they administer government contracts. AFCMD currently has 24 AFPROs scattered across the

United States (AFCMD, 1985). None of these AFPROs is collocated at any Air Force base. Examples of some of the larger AFPROs (over 200 personnel) include Rockwell International, Los Angeles, California; Boeing, Seattle, Washington; Hughes, El Segundo, California; Lockheed, Marietta, Georgia; General Dynamics, Fort Worth, Texas; and Westinghouse, Baltimore, Maryland. While AFCMD is responsible for contract administration, AFSC designs, constructs, tests, and purchases weapons and equipment and initial spare parts for Air Force operational and support commands. Primary emphasis in AFSC is given to aeronautical, space, electronic, missile and armament systems (Air Force Association, 1985). This work is done primarily by the four major product divisions listed above. All of these divisions and all other AFSC divisions, organizations, and centers are located at either an Air Force base or Air Force station.

In order to examine AFCMD job attitudes, this study pursues four objectives:

(1) To review relevant background research and organizational behavior literature to determine what previous researchers have learned about work attitudes, and to determine whether there are hypothesized or confirmed differences among AFCMD, AFSC, and other Air Force personnel;

(2) To compare OAP-measured demographic characteristics and job attitudes of officers and civilians in AFCMD with the attitudes of corresponding personnel in AFSC and in the Air

Force. The comparisons are made using descriptive and inferential statistics (Analysis of Variance [ANOVA] with Newman-Keuls follow-up);

(3) To analyze the statistically significant attitudinal differences among the AFCMD, AFSC, and other Air Force personnel; and

(4) To develop recommendations for AFCMD leadership.

The report addresses each of these goals in the following manner. First, Chapter Two reviews results of relevant background research. Chapter Three discusses the methodology used for this study, and includes an expanded explanation of the LMDC OAP attitude survey used to collect the data, and an explanation of the procedures used in computing and analyzing the data. Chapter Four provides the results from the data analysis, including demographic descriptions and attitudinal summary tables. Chapter Five is a discussion of the areas where there are statistically significant differences. Finally, Chapter Six presents a conclusion and recommendations for AFCMD.

## Chapter Two

### LITERATURE REVIEW

Research on related literature dealing with job attitudes and job satisfaction revealed a considerable amount of information on limited groups of Air Force people, especially pilots and missilemen. However, there was no information found dealing specifically with contract administration personnel and only a few reports on related areas. Therefore, this chapter first reviews some of the important background literature on organizational management theory and then reviews a few studies dealing with Air Force personnel.

There are two major groups of theories dealing with motivation in organizations--content theories and process theories (Hellriegel, Slocum, & Woodman, 1983). Content theories focus on what specific things or actions motivate people, such as higher salaries, better working conditions, and better supervision. Process theories attempt to explain the process of how people start, continue, or stop certain behaviors, and is concerned with rewarding desired behavior to increase the chances it will be repeated. The two major content theories to be discussed are Maslow's need hierarchy theory and Herzberg's two-factor theory. The major process theory to be

discussed is Porter and Lawler's basic expectancy theory. A separate synopsis of each of these three theories follows.

The first major content theory Hellriegel et al. (1983) discussed is Abraham H. Maslow's need hierarchy theory. In it Maslow proposed that people had a complex set of needs which he divided into five hierarchical categories. These five categories are physiological, security, affiliation, esteem, and self-actualization. Maslow also made four assumptions about his hierarchy: (1) Satisfied needs do not motivate; (2) The needs are very complex and a number of needs affect a person at any one time; (3) Lower level needs must be satisfied before higher level needs are addressed; and (4) There are more ways to satisfy higher level needs than lower level needs. In other words, Maslow's theory predicts a dynamic situation where a continuously changing set of needs governs behavior (Hellriegel et al., 1983).

A second major content theory, the two-factor theory, was developed by Frederick Herzberg in the mid 1950's. This theory stated that when people felt dissatisfied about their jobs they were concerned about their environment. But when people felt good about their jobs it had to do with the work itself (Hersey & Blanchard, 1969). Herzberg called these two categories hygiene factors and motivators respectively. The hygiene factors were environmental and included company policies and administration, supervision, working conditions, interpersonal relations with other people on the job, money, status, and

security. The motivators concerned the job itself and included feelings of achievement, recognition for accomplishment, challenging work, increased responsibility, and professional growth and development. For the interested reader, Herzberg (1966) offers a more detailed description of each of these factors.

Herzberg's two-factor theory fits in very well with Maslow's hierarchy of needs by showing how the hygiene factors fulfill the physiological, security, affiliation, and part of the esteem needs; and the motivators fill the rest of the esteem needs and all of the self-actualization needs (Kellriegel et al., 1983). However, Herzberg pointed out that hygiene factors, when satisfied, tend to eliminate dissatisfaction but do not motivate workers. Only satisfaction of the motivators will motivate workers. Herzberg then went on to say that the best motivator of all was to use job enrichment to upgrade a person's responsibility, growth, and challenge of the job. Although some people said Herzberg's two-factor theory was over-simplified, it has endured over the past 25 years and has played a prominent role in today's management of Air Force personnel (Boren, 1980).

Porter and Lawler's basic expectancy theory states that satisfaction is an effect rather than a cause of performance and that differential performance determines rewards, which produce satisfaction. Because of this, the theory emphasizes rewards and the processes of decision making. It also emphasizes that managers must take an active role in the subordinates'

motivational process. In doing so, managers should match people to jobs and establish performance-reward contingencies. Finally, motivation will not lead to better performance unless the manager recognizes it and rewards it on a real time basis (Hellriegel et al., 1983).

All three theories deal with job satisfaction, so it's not surprising that much has been written about how to increase job satisfaction using job enrichment. Job enrichment allows the employee more responsibility for planning, organizing, controlling, and evaluating his own work. Hellriegel et al. (1983) point out that employees whose jobs are enriched are better satisfied and therefore take greater interest in the quality of their work, resulting in fewer redos, lower material consumption, and improved customer satisfaction. In addition, employees have better job attitudes, which relate directly to lower turnover and less absenteeism. Job enrichment also leads to employee goodwill, both on and off the job, and to improved employee health. Still, job enrichment programs do fail, and when they do, job satisfaction decreases (Hellriegel et al., 1983). Some of the major causes cited for failure by Hellriegel et al. (1983) are managerial resistance, lack of organizational commitment, individual differences, technological constraints, and organizational climate. Organizational climate includes the degree of trust, communication, and support existing in an organization.

Because of failures using job enrichment techniques, J. R. Hackman and G. R. Oldham developed a survey to measure job dimensions to try to predict outcomes of job enrichment (Hellriegel et al., 1983). Hackman and Oldham (1980) define job enrichment to include five core job dimensions. They are (1) skill variety--doing different things and using different skills, abilities, and talents; (2) task identity--doing the whole job from beginning to end; (3) task significance--the degree the job has a meaningful impact on others in the organization; (4) autonomy--gives the freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used; and (5) job feedback--the clear and direct information about performance and job outcome. When present, these five core job dimensions lead to three psychological states--meaningfulness, responsibility, and feedback--which eventually lead to greater job satisfaction. In addition to their work on the survey, Hackman and Oldham (1980) developed a formula so that an individual can develop his own job profile. This formula can also be used to measure how motivating or satisfying a job is, and therefore can be used to help determine the individual's growth need.

Within the Air Force, there have been a number of studies dealing with job attitudes, job satisfaction, and job enrichment. For instance, in 1977 the Air Force Human Resources Laboratory completed a handbook on job enrichment (Watson & Zumbro). It went into great detail on how to redesign jobs

using primary motivation, job stimulus conditions, worker perceptions, worker affective responses, and worker behavioral responses. Another handbook was completed the following year and goes into more detail of job redesign (Hendrick, 1978). The second handbook provides four examples of early Air Force job enrichment programs. One of these, Ogden Air Logistics Center, has some similarities with AFPROs. During the trial program at Ogden, Herzberg was brought in by the Air Force to be a consultant. The results of implementing Herzberg's recommendations were so favorable at Ogden that AFLC implemented the program at its four other air logistic centers.

Also in 1977, a study was done on job enrichment for engineering organizations (Purdy). Although AFPROs are not engineering organizations, they do include engineers. The study revealed four common causes for dissatisfaction among engineers in the field. They were (1) misutilization of talent, (2) lack of modular job design, (3) no project management responsibility, and (4) limited paths for growth into larger tasks.

In an Air Force-wide study in 1980, Boren looked at the job satisfaction levels of wage grade board civilians, general schedule civilians, and officers. He found that civilians, both the wage grade board and general schedule, had very positive job satisfaction levels while the officers had slightly less positive satisfaction levels. Boren (1980) further pointed out that his results verified the Air Force had used job enrichment

successfully to increase the level of job satisfaction within these groups.

The next chapter discusses the methodology used to study AFCMD personnel's job attitudes in the present study, to include instrumentation, data collection, subjects, and procedures.

## Chapter Three

### METHODOLOGY

#### Instrumentation

LMDC's OAP was used to collect the data for this study (Appendix C). The OAP consists of a computer-scored, 109-item survey. Responses in the survey use a scale of 1 to 7, with a value of "1" generally indicating strong disagreement or dissatisfaction with the question or statement and a "7" generally indicating strong agreement or satisfaction. The exact meaning of each response is clearly indicated in the introduction to each module of the survey (Short, 1985). The survey consists of 16 demographic items and 93 attitudinal items.

The OAP survey then groups items in the individual attitudinal modules into factors, making the results more reliable and interpretable. According to Short (1985) the reliability for the primary OAP factors is acceptable to excellent and all factors are strong, stable and consistent.

There are 13 key factors used in LMDC's consultation process and they are grouped under three areas of organizational functioning. The first area, Mission/Resources, includes the factors of Job Performance Goals, Task Characteristics, Task

Autonomy, and Job Related Training. This area deals with the task properties and environmental conditions of the job. The second area, Leadership Effectiveness, includes the factors of Performance Barriers/Blockages, Management and Supervision, Supervisory Communications Climate, and Organizational Communications Climate. This area assesses the effectiveness of the supervisors and the process of accomplishing the work. The third area, Unit Effectiveness, includes the factors of Pride, Advancement/Recognition, Work Group Effectiveness, General Organizational Climate, and Job Related Satisfaction. This area measures task performance, group development, and effects on group members.

In addition, a fourth area, Job Enrichment, is considered important even though it does not contain any of the 13 key factors normally used in management consultation. It includes the factors of Skill Variety, Task Identity, Task Significance, Job Feedback, and Need for Enrichment Index. This area measures the degree to which the job itself is interesting, meaningful, challenging, and responsible.

Another important aspect of the OAP is its substantiated reliability and validity. Short (1985) described a previous paper he had done in 1981 that provided evidence of the factor-by-factor reliability of the OAP. During his study, he used the test-retest for stability and Cronbach's alpha for internal consistency. All the primary factors were shown to be reliable. In addition to reliability, Short pointed out the OAP validity

was verified in a number of studies done by Conlon in 1980, Short and Wilkerson in 1981, and Webster in 1982. All the results clearly indicated a significant convergent validity for the OAP.

#### Data Collection

LMDC personnel collected the data used in this report in conjunction with management consultation visits to numerous Air Force organizations. Major unit commanders initiated the consultation process through a written request to LMDC. Once the request was approved, LMDC sent a team to the organization to administer the OAP survey over a one or two week period, depending on the size of the organization. The survey was given in a controlled environment in group sessions with all unit personnel present for duty given the opportunity to complete the survey. Furthermore, only LMDC consultants handled the surveys and complete anonymity was promised to unit personnel. LMDC also gathered complementary data while visiting the unit to round out their consultation. (Only the data gathered through the OAP survey were used in the present report.)

Although from an Air Force-wide perspective, the survey was an "opportunity sample," the data are representative of the bases where they were collected. All OAP survey responses collected are added to a cumulative data base of survey results maintained on a computer at Gunter Air Force Station, Alabama. This cumulative data base represents a large portion of the Air

Force population. (To ensure current data, this study uses only data collected from 1 October 1981 to 15 September 1985.)

After the initial data collection, LMDC personnel analyzed the data to determine the organizational strengths and weaknesses as viewed by the organizational personnel (Commander's Guide, 1983). They returned to the unit to validate the survey data and give specific feedback to supervisors. During this feedback process, confidentiality was maintained in regards to specific responses. LMDC also conducted workshops and seminars as required to train unit supervisors. Approximately four to six months after the feedback visit, another LMDC team returned to the unit to measure the progress of the organization. At this time, LMDC administered the OAP survey again, conducted interviews with selected managers, and collected key management indicators. After analyzing this new information, LMDC sent a confidential report on the follow-up results to the commander of the organization. (No data from second OAP administrations were included in this study.)

### Subjects

The subjects for this study included active duty officers and Air Force civilian employees from three independent groups: AFPROs, AFSC, and other Air Force personnel. In addition, only data from subjects stationed within the continental United States were included. The subjects from the AFPROs included 37 officers and 533 civilians. These personnel were from three

AFPROs: Aerojet, Sacramento, California; Hughes, El Segundo, California; and Rockwell, North American Aircraft Operations, Los Angeles, California (including the Palmdale and Columbus organizations).

The AFSC subjects (excluding AFPRO personnel) included 1,890 officers and 4,150 civilians. These personnel were from 11 different bases including Andrews Air Force Base, Maryland; Wright-Patterson Air Force Base, Ohio; Edwards Air Force Base, California; Eglin Air Force Base, Florida; Norton Air Force Base, California; Hanscom Air Force Base, Massachusetts; and Los Angeles Air Force Station, California, among others.

Finally, the Air Force subjects (AFSC and AFPRO personnel excluded) consisted of 10,700 officers and 20,010 civilians. These personnel were from 80 different Air Force bases across the country. Exact sample sizes vary from one OAP factor to another due to some surveys being incomplete.

### Procedures

The analyses of the three groups were conducted in two separate comparisons. First is an analysis of demographics to characterize the three sample groups. The second analysis is a comparison of AFPRO personnel's job attitudes to those of AFSC personnel and to those of the other Air Force personnel.

### Analysis of Demographics

In this study, the LMDC data base was divided into three groups: AFPROs, AFSC, and the Air Force. These groups were then sub-divided into officers and civilians. The Statistical

Package for the Social Sciences subprogram "Crosstabs" was used to analyze the data.

#### Comparison of AFPRO, AFSC, and Air Force Personnel

For this comparison the LMDC data base was divided into the same three major groups: AFPROs, AFSC, and Air Force. The ANOVA procedure was used to determine whether the groups differed, and the Newman-Keuls procedure was then used, where needed, as a follow-up test to determine whether the specific differences were higher or lower among the groups. These procedures were used to indicate reliable differences with a 95% level of confidence, meaning there is a 95% reliability the differences did not occur by chance. In addition, these procedures were used to determine which factors varied significantly among the three sample groups. Comparisons were made in relation to the four areas of organizational functioning: Mission/Resources, Leadership Effectiveness, Unit Effectiveness, and Job Enrichment.

The results of these procedures are in Chapter Four where demographic and attitudinal data are provided in descriptive paragraphs and in summary tables.

## Chapter Four

### RESULTS

This chapter presents the results of the statistical analyses conducted on the OAP survey data. First are the results from the analysis of demographics in descriptive paragraphs, then the results from the comparisons of AFPRO, AFSC, and Air Force personnel's job attitudes.

#### Analysis of Demographics

Tables A-1 through A-22, Appendix A, provide detailed descriptive information on officer and civilian personnel in AFPROs, AFSC, and the Air Force.

#### Officer Personnel

The description of a typical AFPRO officer respondent is profiled. He has at least 8 years in service, over 18 months at his present duty station, over 36 months in his career field, and less than 18 months in his present position. The typical AFPRO officer respondent is also married with his spouse employed, and less than half of the responding officers hold advanced degrees. Even though 40% of the respondents supervise four or more people, the typical respondent is not a supervisor and does not write performance reports. In addition, 36% report their supervisors do not actually write their performance

reports. Finally, 74% indicate they either will, or likely will, make the Air Force a career.

A typical AFSC officer respondent is very similar to an AFPRO officer respondent. He has more than 8 years in service, over 18 months at his present duty station, more than 36 months in his career field, and less than 18 months in his present position. The typical AFSC officer respondent is married with his spouse not employed, and 57% of the responding officers hold advanced degrees. Even though 29% of the respondents supervise four or more people, 56% of the respondents are not supervisors and 56% do not write performance reports. In addition, 17% report their supervisors do not actually write their performance reports. Finally, 67% indicate they either will, or likely will, make the Air Force a career.

The typical data base Air Force officer's demographics are very similar to both the AFPRO and AFSC officer respondents. He has more than 8 years in service, over 18 months at his present duty station, more than 36 months in his career field, and less than 12 months in his present position. The typical Air Force officer respondent is married with less than half of the spouses employed, while 46% of these officers hold advanced degrees. Even though 38% of the respondents supervise four or more people, 38% are not supervisors and 49% do not write performance reports. In addition, 13% report their supervisors do not actually write their performance reports. Finally, 75% indicate they either will, or likely will, make the Air Force a career.

Now that descriptions of the three groups of officers are complete, demographic reviews are presented of the typical civilian respondents from the three groups.

#### Civilian Personnel

A typical AFPRO civilian respondent is described first. At the AFPROs, 55% of the respondents have more than 8 years federal service and over 33% have more than 36 months at their present duty stations. Most of them have 36 months in the career field and 21% have been in their present positions more than 36 months. Over 57% of the respondents are married. In addition, while 88% of the respondents have more than a high school diploma, 37% have at least a bachelor's degree. Eighty-two percent of them are not supervisors. Only 5% of the respondents report their supervisors did not write their appraisals, while 11% were not sure who wrote their appraisals. More than 76% of them either most likely, or definitely, plan to make the civil service a career.

Next, the profile of the AFSC civilian respondents is presented. Seventy-one percent have more than 8 years federal service and over 72% have more than 36 months at their present duty stations. Most of them have over 36 months in the career field, and over 44% have been in their present positions more than 36 months. More than 72% of the respondents are married. In addition, while 80% of the respondents have more than a high school diploma, 48% have at least a bachelor's degree. Seventy-nine percent are not supervisors. Only 8% report their

supervisors did not write their appraisals, while 10% were not sure who wrote their appraisals. More than 79% either definitely, or most likely, plan to make the civil service a career.

Last is a description of the data base Air Force civilians. Sixty-seven percent have more than 8 years federal service and over 63% have more than 36 months at their present duty stations. Most of them have over 36 months in the career field, and over 41% have been in their present positions more than 36 months. More than 76% of the respondents are married. In addition, 61% of the respondents have more than a high school diploma and 17% have at least a bachelor's degree. Sixty-seven percent are not supervisors. Only 10% report their supervisors did not write their appraisals, while 13% were not sure who wrote their appraisals. More than 81% either definitely, or most likely, plan to make the civil service a career.

In addition to these descriptions of typical officer and civilian respondents, there are some demographic differences that should be highlighted. First, 46% of the responding AFPRO civilians have been on station for less than 18 months. This compares to 16% in the AFSC group and 21% in the Air Force group. This, of course, results in the fact that more than 58% of the AFPRO civilian respondents have been at their present positions for less than 18 months while only 36% of the AFSC respondents and 39% of the Air Force data base respondents had been in their present positions for less than 18 months. An

additional characteristic that may contribute to the high mobility of AFPRO respondents relative to AFSC and Air Force respondents is that only 57% of civilian AFPRO respondents were married compared to 72% for AFSC and 76% for Air Force respondents.

#### Comparison of AFPRO, AFSC, and Air Force Personnel's Attitudes

Significant attitudinal differences were found to exist between AFPRO personnel and AFSC personnel, and between AFPRO personnel and Air Force personnel, in all four major areas: Mission/Resources, Leadership Effectiveness, Unit Effectiveness, and Job Enrichment (see Tables B-1 thru B-4, Appendix B). The following paragraphs discuss attitudinal differences within these areas.

##### AFPRO Personnel versus AFSC Personnel

Results of the ANOVA procedure indicate AFPRO personnel were significantly different from AFSC personnel on 9 of the 18 OAP factors which were considered for this analysis. These are summarized (from Appendix B) in Table 1 (see next page). It should be noted that AFPRO personnel expressed less positive views on all nine of the significantly different factors.

In the Mission Resources area, AFPRO personnel reported lower ratings on the Task Characteristics factor. This indicates they are less satisfied than other AFSC personnel with several aspects of their jobs. AFPRO personnel also rated Job Related Training lower than AFSC personnel. This indicates they

are less satisfied with the technical and on-the-job training they have received.

Table 1  
Summary of AFPRO-AFSC Significant Differences

| Area                           | AFPRO | AFSC | Diff |
|--------------------------------|-------|------|------|
| Mission/Resources              |       |      |      |
| Task Characteristics           | 5.10  | 5.19 | -.09 |
| Job Related Training           | 4.15  | 4.43 | -.28 |
| Leadership Effectiveness       |       |      |      |
| Management and Supervision     | 4.99  | 5.14 | -.15 |
| Unit Effectiveness             |       |      |      |
| Work Group Effectiveness       | 5.38  | 5.70 | -.32 |
| General Organizational Climate | 4.63  | 4.79 | -.16 |
| Job Enrichment                 |       |      |      |
| Skill Variety                  | 5.02  | 5.18 | -.16 |
| Task Significance              | 5.30  | 5.44 | -.14 |
| Job Feedback                   | 4.80  | 4.91 | -.11 |
| Need for Enrichment Index      | 5.89  | 5.98 | -.09 |

In the area of Leadership Effectiveness, AFPRO personnel rated the Management and Supervision factor lower than other AFSC personnel. This indicates their perceptions of their supervisors are not as favorable as AFSC personnel's perceptions of their supervisors.

The third area is Unit Effectiveness, with AFPRO personnel lower than other AFSC personnel on two factors. First, the Work Group Effectiveness factor was significantly lower. This indicates the AFPRO personnel thought their productivity was lower than AFSC personnel. The second factor rated lower was General Organizational Climate. This indicates AFPRO personnel's perceptions of their organizational environment are

not as favorable as the perceptions of the rest of AFSC's personnel.

Finally, in the Job Enrichment area, four factors showed significant differences. AFPRO personnel indicated they perceived their jobs required less Skill Variety than AFSC personnel. The AFPRO personnel also reported their jobs were less significant than other AFSC personnel and they receive less feedback on their job performance. Additionally, AFPRO personnel indicated a stronger desire to have their jobs enriched than AFSC personnel.

#### AFPRO Personnel versus Air Force Personnel

Results of the ANOVA procedure indicate AFPRO personnel were significantly different from other Air Force personnel on 12 of the 18 DAP factors which were considered for this analysis.

Table 2

#### Summary of AFPRO-AF Significant Differences

| Area                           | AFPRO | AF   | Diff |
|--------------------------------|-------|------|------|
| Mission/Resources              |       |      |      |
| Job Performance Goals          | 4.61  | 4.85 | -.24 |
| Task Characteristics           | 5.10  | 5.35 | -.25 |
| Job Related Training           | 4.15  | 4.57 | -.42 |
| Leadership Effectiveness       |       |      |      |
| Organizational Comm Climate    | 4.48  | 4.74 | -.26 |
| Unit Effectiveness             |       |      |      |
| Pride                          | 5.15  | 5.50 | -.35 |
| Work Group Effectiveness       | 5.38  | 5.69 | -.31 |
| General Organizational Climate | 4.63  | 4.96 | -.33 |
| Job Enrichment                 |       |      |      |
| Skill Variety                  | 5.02  | 5.21 | -.19 |
| Task Identity                  | 5.22  | 5.32 | -.10 |
| Task Significance              | 5.30  | 5.81 | -.51 |
| Job Feedback                   | 4.80  | 5.02 | -.22 |
| Need for Enrichment Index      | 5.89  | 5.80 | +.09 |

These are summarized (from Appendix B) in Table 2. AFPRO personnel expressed less positive views on 11 of these factors and a more positive view on only one factor.

In the Mission/Resources area, the AFPRO personnel were lower in three key factors. First, the Job Performance Goals factor indicates they feel their job performance goals are not as clear, specific, or realistic as the other Air Force personnel. The second key factor rated lower was Task Characteristics. This indicates AFPRO personnel are less satisfied with their jobs. The third factor in the Mission/Resources area rated lower was Job Related Training. This indicates personnel are less satisfied with the technical and on-the-job training they have received.

The second major area, Leadership Effectiveness, had only one key factor, Organizational Communications Climate, rated significantly lower by AFPRO personnel. This indicates the AFPRO personnel feel management is not as responsive to their needs as other Air Force personnel view their management.

The third major area, Unit Effectiveness, had three factors rated significantly lower for AFPRO personnel as compared to Air Force personnel. First, AFPRO people have a lower feeling of Pride in their jobs. Second, AFPRO personnel perceive their Work Group Effectiveness is lower. This relates to the quality and quantity of their work group output. General Organizational Climate was the third factor rated significantly lower in the unit effectiveness area. This indicates AFPRO personnel feel

their organizations are not interested in them as much as Air Force personnel think their organizations are.

In the last major area, Job Enrichment, all five factors were significantly different between the groups. AFPRO personnel indicated they perceived their jobs required less Skill Variety than other Air Force personnel. They found their Task Identity, or their perception of how much of a complete work unit they perform, was lower than for Air Force personnel. Furthermore, their perceptions of the Task Significance of their jobs were significantly lower than those of Air Force personnel. Finally, AFPRO personnel felt they received less feedback than Air Force personnel on job performance. However, in the Need for Enrichment Index factor, AFPRO personnel had less desire than the Air Force personnel to have their jobs enriched.

In summary, AFPRO personnel were statistically significantly less positive than either AFSC or Air Force personnel in all major areas. Table 3 (on next page) shows the summary of the four areas and the 18 factors. The "-" or "+" indicates either a negative or positive significant statistical difference in the given factor in comparison with the indicated group. For detailed information on the results for these factors please refer to Appendix B.

Specifically, AFPRO personnel were less positive than both AFSC and Air Force personnel on seven factors: Task Characteristics, Job Related Training, Work Group Effectiveness, General Organizational Climate, Skill Variety, Task Significance, and

Table 3

## Summary of Significant Differences

| Factor                         | AFPRO/AFSC | AFPRO/AF |
|--------------------------------|------------|----------|
| Mission/Resources              |            |          |
| Job Performance Goals          |            | -        |
| Task Characteristics           | -          | -        |
| Task Autonomy                  |            |          |
| Job Related Training           | -          | -        |
| Leadership Effectiveness       |            |          |
| Performance Barriers/Blockages |            |          |
| Management and Supervision     | -          |          |
| Supervisory Comm Climate       |            |          |
| Organizational Comm Climate    |            | -        |
| Unit Effectiveness             |            |          |
| Pride                          |            | -        |
| Advancement/Recognition        |            |          |
| Work Group Effectiveness       | -          | -        |
| Gen Organizational Climate     | -          | -        |
| Job Related Satisfaction       |            |          |
| Job Enrichment                 |            |          |
| Skill Variety                  | -          | -        |
| Task Identity                  |            | -        |
| Task Significance              | -          | -        |
| Job Feedback                   | -          | -        |
| Need for Enrichment Index      | -          | +        |

Job Feedback. Also, AFPRO personnel were less positive than AFSC personnel (only) in two other factors: Management and Supervision and Need for Enrichment Index. In addition, AFPRO personnel were less positive than Air Force personnel (only) in four other factors: Job Performance Goals, Organizational Communications Climate, Pride, and Task Identity. On the other hand, AFPRO personnel were significantly more positive than Air Force personnel (only) in one factor: Need for Enrichment Index. (The results also show AFSC personnel were statistically significantly less positive than Air Force personnel in 10 factors and more positive in only two factors.)

It is obvious there is a general trend for AFPRO personnel to be less satisfied than AFSC personnel and AFSC personnel to be less satisfied than Air Force personnel. Although the results seem quite significant, they can not stand alone without discussion of them. The next chapter discusses the significant results and relates them to the motivation theories discussed earlier and the realities of the AFPRO work environment.

## Chapter Five

### DISCUSSION

The purpose of this study is to provide AFCMD leadership an analysis of LMDC's OAP survey data by identifying important demographic differences and discussing how AFCMD's respondents perceived their overall job attitudes as compared to other AFSC and other Air Force respondents. AFCMD leadership may use this analysis to determine if policy or program changes should be made to increase favorability of job attitudes among AFCMD personnel.

#### Demographics

In the area of demographics, the high mobility of the AFPRO work force was highlighted. Specifically, even though the ages of the personnel in the three groups were very close, AFPRO respondents had significantly less time in the Air Force than the other two groups. For instance, 26% of the AFPRO personnel had less than 3 years in the Air Force while only 13% of the AFSC respondents and 16% of the Air Force respondents had less than 3 years. Furthermore, the AFPRO personnel had less time at their current duty stations and in their current jobs. While 46% of the AFPRO personnel had been at their duty stations for less than 18 months, only 16% of the AFSC personnel and 21% of

the Air Force personnel had been at their duty stations less than 18 months. Also, 58% of the AFPRO personnel had been in their present positions for less than 18 months, compared to only 36% for the AFSC personnel and 39% for the Air Force personnel. The last factor, which may impact the mobility of the AFPRO workforce, is that 37% of them are not married. This compares to 20% for the AFSC personnel and 18% for the Air Force personnel.

These demographics must be balanced with the fact that two of the three AFPROs in the sample were in the Los Angeles area which experiences a much higher turnover rate than AFSCMD in general. This may be a major factor in the lower attitudinal differences of AFPRO respondents as compared to AFSC and Air Force respondents.

#### Attitudinal Differences

The results of the attitudinal differences were not encouraging. AFPRO respondents had consistently less positive job attitudes than either AFSC or Air Force respondents. Because of the number of factors which are statistically significantly different, the discussion of the attitudinal differences will be presented by the four major areas of organizational functioning.

#### Mission Resources

Within this area, Job Related Training had the second lowest mean of the 18 factors examined. So even though the AFPRO respondents were significantly lower than the other two groups, those groups were also relatively low compared to their other

factors. Job Related Training is made up of both technical and on-the-job training. With the high turnover experienced in AFCMD, and especially in the Los Angeles area, it is understandable this factor would be rated low. According to Lt Col Larry E. Bost, Deputy Director of Plans at AFCMD, the command normally receives about 45% of the slots for technical courses needed to complete their annual training requirements (personal communication, February 28, 1986). The problem of on-the-job training is also compounded by the high turnover because the experienced people are often too busy with their primary work to teach someone new how to do the job. If an individual is not properly trained, either through technical or on-the-job training, there is little chance he can be motivated, or become motivated, according to Herzberg's two-factor theory motivators. An individual must understand the fundamentals of a job before he reaches out for those motivators such as more challenging work, increased responsibility, or professional growth and development. Nor is there a very good chance that individual would become satisfied according to the Porter and Lawler's basic expectancy theory because satisfaction is thought to be an effect, rather than a cause, of performance.

Another factor in the Mission/Resources area on which AFPRO respondents were significantly lower than both AFSC and Air Force respondents was Task Characteristics. This factor is basically a combination of the Job Enrichment area factors which had the highest mean of the four areas. AFPRO respondents also

rated this factor a full half point higher than any of the other factors in this area.

The third and last factor rated significantly lower by the AFPRO personnel in this area was Job Performance Goals. This factor, which measures the extent to which job performance goals are clear, specific, realistic, understandable, and challenging was also rated very low by the AFSC respondents. There are few checklists to follow at the AFPROs as there are in many parts of the Air Force because other than in the quality assurance area, AFPRO work tends not to be checklist oriented. The high turnover rate influences this factor because it is hard to set meaningful goals for trainees in an unstructured environment.

#### Leadership Effectiveness

AFPROs were only statistically different once from each group in this area. They were significantly different in the Organizational Communications Climate comparison with Air Force respondents. This factor measures the workers perceptions of open communications in the organization and that adequate information is provided to accomplish the job. When there is a 15:1 ratio of civilian to military personnel, coupled with the fact that the working environment is in a contractor's facility, it is not hard to understand that many of the civilians may not feel they are in a military organization. However, every AFPRO is a military organization and has a military commander and deputy commander (except for two AFPROs) and tend to be more structured than civilian organizations.

AFPRO respondents also had a significant difference from AFSC respondents in the Management and Supervision factor. This factor had the highest mean in the area and with each group. The difference, even though statistically significant, probably is not practically significant when the ratio of civilian to military is considered in light of the Los Angeles location of two of the sample AFPROs.

#### Unit Effectiveness

The area of Unit Effectiveness had two factors in which AFPRO respondents were significantly different from both AFSC and Air Force respondents, and one factor for which they were significantly different from just the Air Force respondents. In addition, the factor of Advancement/Recognition will be discussed.

Even though the AFPRO respondents rated the Work Group Effectiveness factor very high, they were still significantly lower than both AFSC and Air Force respondents. This factor measures their perceptions of the work group's productivity. It is understandable with the high turnover rate that this would be rated lower than the other two groups. However, it is surprising it is rated so high by the AFPRO respondents. This indicates the work groups are maintaining some cohesiveness even with the high turnover.

The General Organizational Climate factor was the second factor in this area for which AFPRO respondents were significantly different from both AFSC and Air Force

respondents. This factor measures the individual's perception of the organizational environment, to include the organization's commitment, communications, and organizational pride. The perceptions of the AFPRO respondents indicate that, even though the smaller work groups are maintaining some cohesiveness, the organizations as a whole are not. Again, even with the high turnover rate, workers have the opportunity to get to know the people in their work areas, but find it difficult to relate to all the new people in the organization, thus causing a lower perception of the overall organizational environment.

AFPRO respondents were also significantly different from the Air Force data base in the factor of Pride (AFSC respondents were also significantly lower than the Air Force data base in this factor). This may go back to the basic mission of the Air Force. The Air Force data base is more operationally oriented than either AFSC or AFCMD. While AFCMD provides contract administration support to the AFSC product divisions, it is also a separate equal organization with its own mission.

Although there was not a statistical difference between the three groups in the Advancement/Recognition factor, it should be noted because it had the lowest mean of all 18 factors across all four areas. All three theories discussed in Chapter Two point out that individuals will not be satisfied or motivated unless they feel their work is recognized and they are given the opportunity to advance. This is tied very closely to the Job

Related Training factor which had the second lowest mean average (just above Advancement/Recognition) of all the factors.

#### Job Enrichment

The final area of Job Enrichment had four of the five factors significantly different between AFPRO respondents and both AFSC and Air Force respondents. In the fifth factor, Task Identity, AFPRO respondents were significantly different from only the Air Force data base. Regardless of the differences, this area had the highest means of the four areas. Also, this area had the only factor, Need for Enrichment Index, in which the AFPRO respondents were positively significantly different from both comparison groups.

The Task Significance factor had the largest difference in means for any factor in the comparison between the AFPRO respondents and the Air Force data base. Again, this may relate to the fact that the AFPROs provide contract administration support to AFSC, while the Air Force data base has many operational organizations in it. It should be noted that the difference between the means for the AFSC respondents and the Air Force data base was also the largest difference between those two groups. This supports the idea that personnel in nonoperational jobs have a much lower perception of the significance of their jobs relative to the main stream of the Air Force.

AFPRO respondents also were significantly lower than both AFSC and Air Force respondents in the Skill Variety factor. This factor measures the extent to which the job requires a person to

do different things and use different skills. It is not surprising this factor was rated lower with the high turnover rate of the AFPROs because new people tend to be less able to handle variation in their work than more experienced workers.

The third factor rated significantly lower by the AFPRO respondents, compared to the AFSC respondents and the Air Force data base, was Job Feedback. Porter and Lawler's basic expectancy theory points out that managers must take an active role in the subordinates' motivational process. This is even more important with new employees who are unsure of themselves on the job. Because of the turnover rate, many of the AFPRO respondents fall in the category of needing more feedback than an average employee.

Finally, the AFPRO respondents, as expected, had their highest mean in the Need for Enrichment Index factor. This factor also had the highest overall mean and it was the only factor for which the AFPRO respondents were significantly more positive than the Air Force data base. This shows a strong desire for personal growth on the job. The turnover rate also affects this factor. Many of the employees are in training programs and are looking for opportunities to move ahead at a more rapid pace.

In summary, it is clear AFPRO respondents were less positive overall in their job attitudes than either AFSC respondents or Air Force respondents. The high turnover rate experienced by

AFCMD is both a cause and an effect of the lower job attitudes. However, AFCMD is taking actions to increase their personnel's job attitudes. These actions and some other possible actions that could be taken are discussed in the next chapter.

## Chapter Six

### CONCLUSIONS AND RECOMMENDATIONS

#### Conclusions

This study indicates AFPMO is faced with a potentially serious problem with the overall less favorable job attitudes of their personnel. The statistical analysis pointed out a clear trend of lower perceived satisfaction when the AFPRO respondents were compared to AFSC and Air Force data base respondents. A basic contributor is the high civilian turnover rate experienced by the division which seemed to act as both a cause, and an effect, of the less favorable job attitudes. However, in light of the recent publicity government buying agencies have received, one could assume the differences between the AFPRO personnel and AFSC personnel might not currently be as great as this study reflects.

AFPMO personnel are involved in a number of programs to increase the favorability of their people's job attitudes. Some of these programs are in the area Herzberg called the "hygiene factors," which are not thought to motivate individuals nor increase their job satisfaction; rather, hygiene factors only lessen dissatisfaction and maintain the status quo. For example, in the Los Angeles area, clerical workers are paid

a special higher rate than other clerical workers around the country. Since money is considered a hygiene factor which does not increase job satisfaction, the result is having clerks staying on the job for the money and not for the satisfaction they get from the job. Another example is flexitime, a policy generally considered a hygiene factor, which normally does not increase the employee's overall job satisfaction unless it increases job autonomy. However, it needs to be pointed out that the use of hygiene factors are necessary to maintain a certain level of satisfaction but they are not sufficient to increase job satisfaction.

On the other hand, some initiatives by AFCEMD to help increase job satisfaction seem to be on the right track. For instance, the command is starting a Professional Development Office to train new employees in AFCEMD "unique" courses. If this program is large enough it could have a substantial positive impact on a number of attitudinal factors previously discussed. AFCEMD also has a relatively new Directorate of Information Systems which is chartered to increase the quality and accuracy of automated information to and from the AFPROs. This should help clear up some of the problems in dealing with such a variety of contracting organizations.

Nonetheless, the data does reflect a perception that AFPRO personnel are the least satisfied of the three groups in this study. Although the differences were not as great, the fact that the AFPRO respondents were consistently lower than the AFSC

respondents in their job attitudes is more serious than the AFPRO differences between the Air Force respondents. AFPROs basically compete for the same civil service personnel as the rest of AFSC, although the grade average in the AFPROs is slightly less than other AFSC activities. To better compete and to better maintain their current personnel, AFCMD must improve their personnel's job attitudes. To this end, strong leadership, especially at the AFPRO level, is essential. As Peters and Waterman (1982) pointed out in their book In Search of Excellence, "associated with almost every excellent company was a strong leader" (p. 26). Leadership can help make a difference in increasing the overall job satisfaction levels of the AFPROs and the command.

#### Recommendations

After concluding this study, the author recognized the need to increase the general satisfaction levels of job attitudes for AFCMD personnel. Although this presents a substantial task to AFCMD, it must be done since people are truly the command's most valuable resource. Based on this study, and from the author's perspective after serving at an AFPRO for three years, the following recommendations are presented to AFCMD leadership:

- (1) Continue their current initiatives to increase the stature of AFCMD in the eyes of AFSC and the Air Force.
- (2) Focus more on motivators than hygiene factors in future initiatives.

(3) Look into the feasibility of additional job enrichment for their personnel.

(4) Upgrade local AFPRO training programs.

(5) Ensure personnel fully understand AFPRO's mission and how it fits into our overall national defense posture.

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## APPENDIX

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### APPENDIX A

#### Analysis of Demographic Information

Appendix A

Table A-1

Number of Respondents by Personnel Category

|          | n= | AFPRO<br>(570) | AFSC<br>(6,040) | AF<br>(30,708) |
|----------|----|----------------|-----------------|----------------|
| Officer  |    | 37             | 1,889           | 10,698         |
| Civilian |    | 533            | 4,151           | 20,010         |

Table A-2

Sex by Personnel Category

|          | -----AFPRO----- |           | -----AFSC----- |           | -----AF----- |           |
|----------|-----------------|-----------|----------------|-----------|--------------|-----------|
|          | Male(%)         | Female(%) | Male(%)        | Female(%) | Male(%)      | Female(%) |
| n=       | 359             | 209       | 3,813          | 2,195     | 21,490       | 9,023     |
| Officer  | 8.9             | 2.9       | 40.1           | 16.2      | 44.0         | 13.4      |
| Civilian | 91.4            | 97.1      | 59.9           | 83.8      | 56.0         | 86.6      |

Table A-3

Age by Personnel Category

|              | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|--------------|-----------------|--------|----------------|--------|--------------|--------|
|              | Off(%)          | Civ(%) | Off(%)         | Civ(%) | Off(%)       | Civ(%) |
| n=           | 37              | 533    | 1,889          | 4,151  | 10,698       | 20,004 |
| 17 to 20 Yrs | 0.0             | 1.1    | 0.0            | 0.7    | 0.0          | 1.3    |
| 21 to 25 Yrs | 27.0            | 5.4    | 17.9           | 4.9    | 11.1         | 6.5    |
| 26 to 30 Yrs | 18.9            | 9.9    | 22.1           | 8.9    | 29.1         | 10.9   |
| 31 to 35 Yrs | 24.3            | 11.3   | 18.9           | 12.6   | 24.2         | 14.9   |
| 36 to 40 Yrs | 18.9            | 12.4   | 19.9           | 15.3   | 19.6         | 13.8   |
| 41 to 45 Yrs | 8.1             | 14.4   | 13.9           | 13.1   | 10.5         | 12.4   |
| 46 to 50 Yrs | 2.7             | 13.5   | 4.8            | 16.8   | 3.3          | 13.4   |
| > 50 Years   | 0.0             | 31.9   | 1.8            | 27.8   | 2.2          | 26.8   |

Note: The number "n" is the total number of valid responses in the pre-intervention data base for the variable being examined.

Table A-4  
Time in Air Force

|             | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|-------------|-----------------|--------|----------------|--------|--------------|--------|
|             | OFF(%)          | Civ(%) | OFF(%)         | Civ(%) | OFF(%)       | Civ(%) |
| n=          | 37              | 526    | 1,889          | 3,820  | 10,577       | 17,539 |
| < 1 Yr      | 2.7             | 10.6   | 7.4            | 4.6    | 2.5          | 5.1    |
| 1 to 2 Yrs  | 5.4             | 7.0    | 8.5            | 4.0    | 4.7          | 5.3    |
| 2 to 3 Yrs  | 10.8            | 8.0    | 7.1            | 4.0    | 7.7          | 5.4    |
| 3 to 4 Yrs  | 5.4             | 5.7    | 6.8            | 4.5    | 7.3          | 5.0    |
| 4 to 8 Yrs  | 21.6            | 14.1   | 16.2           | 11.4   | 22.7         | 11.8   |
| 8 to 12 Yrs | 13.5            | 12.4   | 13.4           | 12.9   | 16.8         | 12.4   |
| > 12 Years  | 40.5            | 42.2   | 40.6           | 58.7   | 38.3         | 55.0   |

Table A-5  
Months in Present Career Field

|              | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|--------------|-----------------|--------|----------------|--------|--------------|--------|
|              | OFF(%)          | Civ(%) | OFF(%)         | Civ(%) | OFF(%)       | Civ(%) |
| n=           | 37              | 525    | 1,880          | 4,086  | 10,618       | 19,434 |
| < 6 Mos      | 5.4             | 9.0    | 6.3            | 4.4    | 5.0          | 5.8    |
| 6 to 12 Mos  | 0.0             | 9.0    | 7.8            | 5.3    | 7.6          | 7.7    |
| 12 to 18 Mos | 10.8            | 6.3    | 8.3            | 4.5    | 7.7          | 6.3    |
| 18 to 36 Mos | 21.6            | 16.0   | 19.1           | 11.2   | 22.0         | 13.9   |
| > 36 Mos     | 62.2            | 59.8   | 58.4           | 74.6   | 57.7         | 66.3   |

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Table A-6  
Months at Present Duty Station

|              | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|--------------|-----------------|--------|----------------|--------|--------------|--------|
|              | OFF(%)          | Civ(%) | OFF(%)         | Civ(%) | OFF(%)       | Civ(%) |
| n=           | 36              | 526    | 1,886          | 4,078  | 10,663       | 18,522 |
| < 6 Mos      | 25.0            | 17.5   | 12.8           | 9.4    | 14.0         | 6.2    |
| 6 to 12 Mos  | 8.3             | 16.5   | 15.1           | 6.0    | 16.8         | 8.0    |
| 12 to 18 Mos | 25.0            | 12.4   | 17.0           | 4.4    | 16.3         | 6.4    |
| 18 to 36 Mos | 27.8            | 20.5   | 31.7           | 11.6   | 36.8         | 15.8   |
| > 36 Mos     | 13.9            | 33.7   | 23.3           | 72.6   | 16.2         | 63.6   |

Table A-7  
Months in Present Position

|              | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|--------------|-----------------|--------|----------------|--------|--------------|--------|
|              | OFF(%)          | Civ(%) | OFF(%)         | Civ(%) | OFF(%)       | Civ(%) |
| n=           | 37              | 527    | 1,884          | 4,114  | 10,653       | 19,636 |
| < 6 Mos      | 35.1            | 21.6   | 22.0           | 13.1   | 27.2         | 13.6   |
| 6 to 12 Mos  | 10.8            | 21.6   | 22.3           | 13.7   | 25.1         | 14.8   |
| 12 to 18 Mos | 24.3            | 15.2   | 19.4           | 9.6    | 16.6         | 10.3   |
| 18 to 36 Mos | 24.3            | 19.7   | 27.9           | 19.4   | 24.1         | 19.7   |
| > 36 Mos     | 5.4             | 21.8   | 8.3            | 44.1   | 6.9          | 41.3   |

Table A-8  
Ethnic Group

|                | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|----------------|-----------------|--------|----------------|--------|--------------|--------|
|                | OFF(%)          | CIV(%) | OFF(%)         | CIV(%) | OFF(%)       | CIV(%) |
| n=             | 36              | 522    | 1,878          | 4,104  | 10,646       | 19,684 |
| White          | 77.8            | 70.1   | 87.0           | 79.3   | 87.7         | 64.6   |
| Black          | 11.1            | 12.5   | 5.9            | 8.8    | 5.8          | 9.6    |
| Hispanic       | 2.8             | 7.9    | 2.6            | 7.7    | 2.3          | 18.2   |
| Amer Ind/Alask | 2.8             | 1.5    | 0.9            | 1.0    | 0.7          | 1.4    |
| Asian/Pac Is   | 2.8             | 6.7    | 1.7            | 1.4    | 1.4          | 3.0    |
| Other          | 2.8             | 1.3    | 1.9            | 1.8    | 2.1          | 3.2    |

Table A-9  
Marital Status

|               | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|---------------|-----------------|--------|----------------|--------|--------------|--------|
|               | OFF(%)          | CIV(%) | OFF(%)         | CIV(%) | OFF(%)       | CIV(%) |
| n=            | 37              | 528    | 1,887          | 4,142  | 10,689       | 19,850 |
| Not Married   | 32.4            | 37.3   | 24.3           | 19.9   | 20.5         | 17.8   |
| Married       | 67.6            | 57.4   | 73.9           | 72.7   | 78.0         | 76.4   |
| Single Parent | 0.0             | 5.3    | 1.8            | 7.4    | 1.5          | 5.8    |

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Table A-10

Spouse Status: AFPRO

|                   | Geographically Separated |        | Not Geo. Separated |        |
|-------------------|--------------------------|--------|--------------------|--------|
|                   | Off(%)                   | Civ(%) | Off(%)             | Civ(%) |
| n=                | 1                        | 27     | 24                 | 276    |
| Civilian Employed | 100.0                    | 85.2   | 62.5               | 63.4   |
| Not Employed      | 0.0                      | 14.8   | 29.2               | 35.9   |
| Military Member   | 0.0                      | 0.0    | 8.3                | 0.7    |

Table A-11

Spouse Status: AFSC

|                   | Geographically Separated |        | Not Geo. Separated |        |
|-------------------|--------------------------|--------|--------------------|--------|
|                   | Off(%)                   | Civ(%) | Off(%)             | Civ(%) |
| n=                | 56                       | 153    | 1,339              | 2,857  |
| Civilian Employed | 48.2                     | 73.9   | 38.6               | 58.5   |
| Not Employed      | 21.4                     | 13.1   | 50.9               | 36.2   |
| Military Member   | 30.4                     | 13.1   | 10.5               | 5.3    |

Table A-12

Spouse Status: AF

|                   | Geographically Separated |        | Not Geo. Separated |        |
|-------------------|--------------------------|--------|--------------------|--------|
|                   | Off(%)                   | Civ(%) | Off(%)             | Civ(%) |
| n=                | 369                      | 889    | 7,968              | 14,353 |
| Civilian Employed | 60.4                     | 67.8   | 33.4               | 53.1   |
| Not Employed      | 19.8                     | 18.6   | 58.3               | 33.9   |
| Military Member   | 19.8                     | 13.6   | 8.4                | 13.0   |

Table A-13  
Educational Level

|                 | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|-----------------|-----------------|--------|----------------|--------|--------------|--------|
|                 | Off(%)          | Civ(%) | Off(%)         | Civ(%) | Off(%)       | Civ(%) |
| n=              | 37              | 531    | 1,883          | 4,121  | 10,670       | 19,706 |
| HS Grad or GED  | 0.0             | 11.3   | 0.1            | 19.3   | 0.3          | 38.2   |
| < 2 Yrs College | 0.0             | 24.3   | 0.2            | 18.5   | 0.3          | 25.0   |
| > 2 Yrs College | 0.0             | 26.6   | 1.6            | 13.6   | 1.3          | 19.1   |
| Bachelors Deg   | 51.4            | 28.1   | 41.6           | 28.2   | 55.0         | 12.2   |
| Masters Deg     | 43.2            | 9.2    | 41.7           | 17.6   | 36.2         | 4.7    |
| Doctoral Deg    | 5.4             | 0.6    | 14.8           | 2.8    | 6.9          | 0.7    |

Table A-14  
Professional Military Education

|                 | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|-----------------|-----------------|--------|----------------|--------|--------------|--------|
|                 | Off(%)          | Civ(%) | Off(%)         | Civ(%) | Off(%)       | Civ(%) |
| n=              | 21              | 103    | 1,077          | 516    | 7,170        | 4,653  |
| None            | 43.2            | 80.7   | 43.0           | 87.5   | 32.9         | 76.6   |
| Phase 1 or 2    | 0.0             | 4.3    | 1.2            | 2.5    | 1.0          | 8.6    |
| Command Academy | 0.0             | 6.2    | 1.5            | 2.0    | 2.2          | 7.0    |
| Sr NCO Academy  | 0.0             | 2.3    | 0.1            | 1.0    | 0.2          | 2.2    |
| SOS             | 27.0            | 1.3    | 18.2           | 1.8    | 28.2         | 0.9    |
| Int Ser Sch     | 16.2            | 3.6    | 19.8           | 2.8    | 23.9         | 3.5    |
| Sr Ser Sch      | 13.5            | 1.7    | 16.4           | 2.2    | 11.6         | 1.1    |

Appendix A

Table A-15

Number People Directly Supervised

|               | -----AFPRO----- |         | -----AFSC----- |         | -----AF----- |         |
|---------------|-----------------|---------|----------------|---------|--------------|---------|
|               | OFFC(%)         | CivC(%) | OFFC(%)        | CivC(%) | OFFC(%)      | CivC(%) |
| n=            | 34              | 453     | 1,754          | 3,453   | 10,086       | 16,403  |
| None          | 50.0            | 82.3    | 56.4           | 79.4    | 38.4         | 67.3    |
| 1 Person      | 2.9             | 1.1     | 6.0            | 2.2     | 7.5          | 3.1     |
| 2 People      | 2.9             | 0.9     | 3.1            | 2.0     | 7.0          | 2.7     |
| 3 People      | 2.9             | 0.9     | 5.2            | 2.3     | 8.5          | 2.9     |
| 4 to 5 People | 11.8            | 4.0     | 11.9           | 4.7     | 14.1         | 5.6     |
| 6 to 8 People | 11.8            | 5.5     | 8.2            | 4.3     | 10.5         | 4.6     |
| 9 or > People | 17.6            | 5.3     | 9.2            | 5.0     | 14.0         | 13.8    |

Table A-16

Number People for Whom Respondent Writes APR/OER/Appraisal

|               | -----AFPRO----- |         | -----AFSC----- |         | -----AF----- |         |
|---------------|-----------------|---------|----------------|---------|--------------|---------|
|               | OFFC(%)         | CivC(%) | OFFC(%)        | CivC(%) | OFFC(%)      | CivC(%) |
| n=            | 37              | 533     | 1,885          | 4,142   | 10,667       | 19,944  |
| None          | 51.4            | 83.9    | 66.1           | 85.0    | 48.8         | 77.3    |
| 1 Person      | 5.4             | 1.5     | 5.5            | 1.6     | 10.0         | 2.2     |
| 2 People      | 5.4             | 0.8     | 3.1            | 1.5     | 7.7          | 2.0     |
| 3 People      | 0.0             | 0.9     | 5.0            | 1.8     | 7.6          | 2.1     |
| 4 to 5 People | 10.8            | 3.9     | 8.8            | 3.4     | 11.8         | 4.0     |
| 6 to 8 People | 10.8            | 5.3     | 6.6            | 3.5     | 8.8          | 3.0     |
| 9 or > People | 16.2            | 3.8     | 5.0            | 3.2     | 5.4          | 9.3     |

Table A-17

## Supervisor Writes Respondent's APR/OER/Appraisal

|          | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|----------|-----------------|--------|----------------|--------|--------------|--------|
|          | Off(%)          | Civ(%) | Off(%)         | Civ(%) | Off(%)       | Civ(%) |
| n=       | 36              | 517    | 1,868          | 4,028  | 10,531       | 19,290 |
| Yes      | 58.3            | 83.6   | 72.5           | 81.6   | 78.6         | 76.9   |
| No       | 36.1            | 5.0    | 17.3           | 8.3    | 13.5         | 9.9    |
| Not Sure | 5.6             | 11.4   | 10.1           | 10.2   | 7.9          | 13.2   |

Table A-18

## Work Schedule

|                 | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|-----------------|-----------------|--------|----------------|--------|--------------|--------|
|                 | Off(%)          | Civ(%) | Off(%)         | Civ(%) | Off(%)       | Civ(%) |
| n=              | 37              | 525    | 1,870          | 4,065  | 10,589       | 19,544 |
| Day Shift       | 91.9            | 94.1   | 74.5           | 93.1   | 56.3         | 86.7   |
| Swing Shift     | 0.0             | 1.5    | 0.2            | 0.8    | 0.2          | 3.8    |
| Mid Shift       | 0.0             | 0.4    | 0.1            | 0.2    | 0.1          | 0.9    |
| Rotating Shift  | 0.0             | 2.3    | 7.5            | 1.5    | 4.3          | 5.2    |
| Irregular Shift | 5.4             | 1.1    | 10.0           | 1.7    | 13.0         | 2.4    |
| Freq TDY/On-Cal | 2.7             | 0.4    | 7.5            | 2.5    | 8.1          | 0.6    |
| Crew Schedule   | 0.0             | 0.2    | 0.1            | 0.1    | 18.0         | 0.4    |

Appendix A

Table A-19  
Supervisor Holds Group Meetings

|              | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|--------------|-----------------|--------|----------------|--------|--------------|--------|
|              | OFF(%)          | Civ(%) | OFF(%)         | Civ(%) | OFF(%)       | Civ(%) |
| n=           | 36              | 522    | 1,971          | 4,079  | 10,565       | 19,692 |
| Never        | 2.8             | 7.9    | 5.9            | 9.8    | 6.7          | 10.2   |
| Occasionally | 19.4            | 36.0   | 26.6           | 42.0   | 22.4         | 33.1   |
| Monthly      | 5.6             | 9.4    | 15.4           | 9.1    | 13.8         | 20.9   |
| Weekly       | 58.3            | 37.7   | 40.2           | 34.4   | 42.5         | 29.3   |
| Daily        | 8.3             | 6.9    | 10.6           | 3.0    | 12.5         | 4.7    |
| Continuously | 5.6             | 2.1    | 1.3            | 1.7    | 2.2          | 1.8    |

Table A-20  
Supervisor Holds Group Meetings to Solve Problems

|               | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|---------------|-----------------|--------|----------------|--------|--------------|--------|
|               | OFF(%)          | Civ(%) | OFF(%)         | Civ(%) | OFF(%)       | Civ(%) |
| n=            | 37              | 512    | 1,857          | 4,018  | 10,511       | 19,430 |
| Never         | 18.9            | 20.7   | 18.7           | 24.6   | 14.7         | 24.2   |
| Occasionally  | 43.2            | 45.9   | 41.8           | 46.2   | 42.7         | 44.4   |
| Half the Time | 21.6            | 18.2   | 21.8           | 15.5   | 21.9         | 15.3   |
| Always        | 16.2            | 15.2   | 17.7           | 13.7   | 20.7         | 16.1   |

Table A-21

## Aeronautical Rating and Current Status

|                          | AFPRO<br>OFF(%)<br>n= 36 | AFSC<br>OFF(%)<br>1,888 | AF<br>OFF(%)<br>10,529 |
|--------------------------|--------------------------|-------------------------|------------------------|
| Nonrated, not on aircrew | 88.9                     | 86.9                    | 56.4                   |
| Nonrated, now on aircrew | 2.8                      | 0.7                     | 2.7                    |
| Rated, on crew/opr job   | 2.8                      | 0.8                     | 32.0                   |
| Rated, in support job    | 5.6                      | 11.5                    | 9.0                    |

Table A-22

## Career Intent

|                 | -----AFPRO----- |        | -----AFSC----- |        | -----AF----- |        |
|-----------------|-----------------|--------|----------------|--------|--------------|--------|
|                 | OFF(%)          | Civ(%) | OFF(%)         | Civ(%) | OFF(%)       | Civ(%) |
| n=              | 34              | 427    | 1,883          | 3,684  | 10,637       | 17,084 |
| Retire 12 Mos   | 5.9             | 4.0    | 5.0            | 5.0    | 3.1          | 6.6    |
| Career          | 55.9            | 46.1   | 46.9           | 48.4   | 51.8         | 52.1   |
| Likely Career   | 17.6            | 26.2   | 20.6           | 25.9   | 22.8         | 22.8   |
| Maybe Career    | 14.7            | 14.3   | 17.5           | 14.7   | 14.6         | 12.2   |
| Likely Separate | 5.9             | 5.2    | 6.4            | 3.0    | 4.8          | 3.5    |
| Separate        | 0.0             | 4.2    | 3.6            | 3.0    | 2.9          | 2.7    |

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## APPENDIX

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APPENDIX B  
Comparison of AFPRO Personnel  
to  
AFSC Personnel and LMDC Data Base

Table B-1  
AFPRO vs AFSC vs AF Personnel

| Mission Resources     |      |      |        |         |           |
|-----------------------|------|------|--------|---------|-----------|
| Factors               | Mean | SD   | Subset | df      | F         |
| Job Performance Goals |      |      |        | 2.35623 | 119.83*** |
| AFPROs                | 4.61 | 1.03 | 1      |         |           |
| AFSC                  | 4.64 | 1.02 | 1      |         |           |
| AF                    | 4.85 | .89  | 2      |         |           |
| Task Characteristics  |      |      |        | 2.36412 | 88.01***  |
| AFPROs                | 5.10 | 1.04 | 1      |         |           |
| AFSC                  | 5.19 | .99  | 2      |         |           |
| AF                    | 5.25 | .94  | 3      |         |           |
| Task Autonomy         |      |      |        | 2.35908 | 19.71***  |
| AFPROs                | 4.63 | 1.29 | 1,2    |         |           |
| AFSC                  | 4.67 | 1.31 | 2      |         |           |
| AF                    | 4.55 | 1.35 | 1      |         |           |
| Job Related Training  |      |      |        | 2.31812 | 31.28***  |
| AFPROs                | 4.15 | 1.41 | 1      |         |           |
| AFSC                  | 4.43 | 1.53 | 2      |         |           |
| AF                    | 4.57 | 1.52 | 3      |         |           |

NOTE: Groups not in the same subset are significantly different at the .05 level.

\* $p < .05$ .    \*\* $p < .01$ .    \*\*\* $p < .001$ .

Table B-2  
AFPRO vs AFSC vs AF Personnel

| Leadership Effectiveness              |      |      |        |         |          |
|---------------------------------------|------|------|--------|---------|----------|
| Factors                               | Mean | SD   | Subset | df      | F        |
| Performance Barriers/Blockages        |      |      |        | 2,35499 | 14.26*** |
| AFPROs                                | 4.66 | 1.03 | 1      |         |          |
| AFSC                                  | 4.70 | 1.05 | 1      |         |          |
| AF                                    | 4.61 | 1.12 | 1      |         |          |
| Management and Supervision            |      |      |        | 2,34618 | 4.15*    |
| AFPROs                                | 4.99 | 1.55 | 1      |         |          |
| AFSC                                  | 5.14 | 1.48 | 2      |         |          |
| AF                                    | 5.09 | 1.57 | 1,2    |         |          |
| Supervisory Communications Climate    |      |      |        | 2,34268 | 1.21     |
| AFPROs                                | 4.64 | 1.54 | 1      |         |          |
| AFSC                                  | 4.70 | 1.55 | 1      |         |          |
| AF                                    | 4.66 | 1.63 | 1      |         |          |
| Organizational Communications Climate |      |      |        | 2,34002 | 38.95*** |
| AFPROs                                | 4.48 | 1.38 | 1      |         |          |
| AFSC                                  | 4.57 | 1.36 | 1      |         |          |
| AF                                    | 4.74 | 1.37 | 2      |         |          |

NOTE: Groups not in the same subset are significantly different at the .05 level.

\*p < .05.    \*\*p < .01.    \*\*\*p < .001.

## Appendix B

Table B-3  
AFPRO vs AFSC vs AF Personnel

| Unit Effectiveness             |      |      |        |         |           |
|--------------------------------|------|------|--------|---------|-----------|
| Factors                        | Mean | SD   | Subset | df      | F         |
| Pride                          |      |      |        | 2,36643 | 121.39*** |
| AFPROs                         | 5.15 | 1.53 | 1      |         |           |
| AFSC                           | 5.20 | 1.46 | 1      |         |           |
| AF                             | 5.50 | 1.41 | 2      |         |           |
| Advancement/Recognition        |      |      |        | 2,34488 | 2.83      |
| AFPROs                         | 4.03 | 1.29 | 1      |         |           |
| AFSC                           | 4.03 | 1.30 | 1      |         |           |
| AF                             | 4.07 | 1.35 | 1      |         |           |
| Work Group Effectiveness       |      |      |        | 2,35439 | 17.34***  |
| AFPROs                         | 5.38 | 1.35 | 1      |         |           |
| AFSC                           | 5.70 | 1.20 | 2      |         |           |
| AF                             | 5.69 | 1.19 | 2      |         |           |
| General Organizational Climate |      |      |        | 2,34011 | 47.53***  |
| AFPROs                         | 4.63 | 1.37 | 1      |         |           |
| AFSC                           | 4.79 | 1.35 | 2      |         |           |
| AF                             | 4.96 | 1.36 | 3      |         |           |
| Job Related Satisfaction       |      |      |        | 2,33229 | 4.48*     |
| AFPROs                         | 5.38 | 1.08 | 1      |         |           |
| AFSC                           | 5.36 | 1.05 | 1      |         |           |
| AF                             | 5.41 | 1.09 | 1      |         |           |

NOTE: Groups not in the same subset are significantly different at the .05 level.

\* $p < .05$ .    \*\* $p < .01$ .    \*\*\* $p < .001$ .

Table B-4  
AFPRO vs AFSC vs AF Personnel

| Job Enrichment            |      |           |        |           |           |
|---------------------------|------|-----------|--------|-----------|-----------|
| Factors                   | Mean | <u>SD</u> | Subset | <u>df</u> | <u>F</u>  |
| Skill Variety             |      |           |        | 2,36648   | 6.09**    |
| AFPROs                    | 5.02 | 1.41      | 1      |           |           |
| AFSC                      | 5.18 | 1.35      | 2      |           |           |
| AF                        | 5.21 | 1.35      | 2      |           |           |
| Task Identity             |      |           |        | 2,36674   | 43.45***  |
| AFPROs                    | 5.22 | 1.20      | 1      |           |           |
| AFSC                      | 5.17 | 1.21      | 1      |           |           |
| AF                        | 5.32 | 1.18      | 2      |           |           |
| Task Significance         |      |           |        | 2,36779   | 252.38*** |
| AFPROs                    | 5.30 | 1.44      | 1      |           |           |
| AFSC                      | 5.44 | 1.34      | 2      |           |           |
| AF                        | 5.81 | 1.22      | 3      |           |           |
| Job Feedback              |      |           |        | 2,36748   | 24.53***  |
| AFPROs                    | 4.80 | 1.27      | 1      |           |           |
| AFSC                      | 4.91 | 1.25      | 2      |           |           |
| AF                        | 5.02 | 1.24      | 3      |           |           |
| Need For Enrichment Index |      |           |        | 2,35631   | 65.34***  |
| AFPROs                    | 5.89 | 1.03      | 2      |           |           |
| AFSC                      | 5.98 | 1.00      | 3      |           |           |
| AF                        | 5.80 | 1.12      | 1      |           |           |

NOTE: Groups not in the same subset are significantly different at the .05 level.

\* $p < .05$ .    \*\* $p < .01$ .    \*\*\* $p < .001$ .

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# APPENDIX

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## APPENDIX C

Organizational Assessment Package Survey:

Factors and Variables

## Appendix C

### FACTORS AND VARIABLES OF THE ORGANIZATIONAL ASSESSMENT PACKAGE

The OAP is a 109-item survey questionnaire designed jointly by the Air Force Human Resources Laboratory and the Leadership and Management Development Center (LMDC) and is used to aid LMDC in its missions to: (a) conduct research on Air Force systemic issues using information in the OAP database, (b) provide leadership and management training, and (c) provide management consultation service to Air Force commanders upon request.

Allowable responses to the attitudinal items on the survey range from 1 (low) to 7 (high). The attitudinal items are grouped into 25 factors that address such areas as the job itself, management and supervision, communications, and performance in the organization. Each data record consists of 7 externally coded descriptors and 24 demographic items as well as the responses to the 93 attitudinal items.

The factors measured by the OAP are grouped into a systems model to assess three aspects of a work group: input, process, and output (adapted from McGrath's model).

Input. In LMDC's adaptation of the model, input is comprised of demographics, work itself, and job enrichment.

A. Demographics. Descriptive or background information about the respondents to the OAP survey.

B. Work Itself. The work itself has to do with the task properties (technologies) and environmental conditions of the job. It assesses the patterns of characteristics members bring to the group or organization, and patterns of differentiation and integration among position and roles. The following OAP factors measure the work itself:

- 806 - Job Desires (Need For Enrichment)
- 810 - Job Performance Goals
- 812 - Task Characteristics
- 813 - Task Autonomy
- 814 - Work Repetition
- 816 - Desired Repetitive Easy Tasks
- 823 - Job Related Training
- Job Influences (not a statistical factor)

C. Job Enrichment. Measures the degree to which the job itself is interesting, meaningful, challenging, and responsible. The following OAP factors measure job enrichment:

- 800 - Skill Variety
- 801 - Task Identity
- 802 - Task Significance
- 804 - Job Feedback
- 806 - Need for Enrichment Index (Job Desires)
- 807 - Job Motivation Index

- 808 - QJI Total Score
- 809 - Job Motivation Index - Additive
- 825 - Motivation Potential Score

Work Group Process. The work group assesses the pattern of activity and interaction among the group members. The following OAP factors measures leadership and the work group process:

- 805 - Performance Barriers/Blockages (Work Support)
- 818 - Management and Supervision
- 819 - Supervisory Communications Climate
- 820 - Organizational Communications Climate
- Work Interferences (not a statistical factor)
- Supervisory Assistance (not a statistical factor)

Work Group Output. Measures task performance, group development, and effects on group members. Assesses the quantity and quality of task performance and alteration of the group's relation to the environment. Assesses changes in positions and role patterns, and in the development of norms. Assesses changes on skills and attitudes, and effects on adjustment. The following OAP factors measure the work group output:

- 811 - Pride
- 817 - Advancement/Recognition
- 821 - Work Group Effectiveness (Perceived Productivity)
- 822 - Job Related Satisfaction
- 824 - General Organizational Climate

### EXTERNALLY CODED DESCRIPTORS

- Batch Number
- Julian Date of Survey
- Major Command
- Base Code
- Consultation Method
- Consultant Code
- Survey Version

(Note: These items are concatenated to each data record during EDP processing.)

**DEMOGRAPHIC ITEMS (NOT A STATISTICAL FACTOR)**

| Variable Number                                    | Statement Number | Statement                               |
|----------------------------------------------------|------------------|-----------------------------------------|
| -                                                  | -                | Supervisor's Code                       |
| -                                                  | -                | Work Group Code                         |
| -                                                  | -                | Sex                                     |
| -                                                  | -                | Your age is                             |
| -                                                  | -                | You are (officer, enlisted, GS, etc.)   |
| -                                                  | -                | Your pay grade is                       |
| -                                                  | -                | Primary AFSC                            |
| -                                                  | -                | Duty AFSC                               |
| (Note: The above items are on the response sheet.) |                  |                                         |
| 001                                                | -                | (Not used)                              |
| 002                                                | -                | (Not used)                              |
| 003                                                | 1                | Total years in the Air Force:           |
|                                                    |                  | 1. Less than 1 year                     |
|                                                    |                  | 2. More than 1 year, less than 2 years  |
|                                                    |                  | 3. More than 2 years, less than 3 years |
|                                                    |                  | 4. More than 3 years, less than 4 years |
|                                                    |                  | 5. More than 4 years, less than 5 years |
|                                                    |                  | 6. More than 5 years                    |

3

| Variable Number | Statement Number | Statement                                                                          |
|-----------------|------------------|------------------------------------------------------------------------------------|
| 004             | 2                | Total months in present career field:                                              |
|                 |                  | 1. Less than 1 month, less than 6 months                                           |
|                 |                  | 2. More than 1 month, less than 12 months                                          |
|                 |                  | 3. More than 6 months, less than 18 months                                         |
|                 |                  | 4. More than 12 months, less than 24 months                                        |
|                 |                  | 5. More than 18 months, less than 36 months                                        |
|                 |                  | 6. More than 24 months, less than 36 months                                        |
|                 |                  | 7. More than 36 months                                                             |
| 005             | 3                | Total months at this station:                                                      |
|                 |                  | 1. Less than 1 month, less than 6 months                                           |
|                 |                  | 2. More than 1 month, less than 12 months                                          |
|                 |                  | 3. More than 6 months, less than 18 months                                         |
|                 |                  | 4. More than 12 months, less than 24 months                                        |
|                 |                  | 5. More than 18 months, less than 36 months                                        |
|                 |                  | 6. More than 24 months, less than 36 months                                        |
|                 |                  | 7. More than 36 months                                                             |
| 006             | 4                | Total months in present position:                                                  |
|                 |                  | 1. Less than 1 month, less than 6 months                                           |
|                 |                  | 2. More than 1 month, less than 12 months                                          |
|                 |                  | 3. More than 6 months, less than 18 months                                         |
|                 |                  | 4. More than 12 months, less than 24 months                                        |
|                 |                  | 5. More than 18 months, less than 36 months                                        |
|                 |                  | 6. More than 24 months, less than 36 months                                        |
|                 |                  | 7. More than 36 months                                                             |
| 007             | 5                | Your Ethnic Group is:                                                              |
|                 |                  | 1. American Indian or Alaskan Native                                               |
|                 |                  | 2. Asian or Pacific Islander                                                       |
|                 |                  | 3. Black, not of Hispanic Origin                                                   |
|                 |                  | 4. Hispanic                                                                        |
|                 |                  | 5. White, not of Hispanic Origin                                                   |
|                 |                  | 6. Other                                                                           |
| 008             | 11               | Which of the following "best" describes your marital status?                       |
|                 |                  | 0. Not married.                                                                    |
|                 |                  | 1. Married: Spouse is a civilian employed outside home.                            |
|                 |                  | 2. Married: Spouse is a civilian employed outside home - geographically separated. |
|                 |                  | 3. Married: Spouse not employed outside home.                                      |
|                 |                  | 4. Married: Spouse not employed outside home - geographically separated.           |
|                 |                  | 5. Married: Spouse is a military member.                                           |
|                 |                  | 6. Married: Spouse is a military member - geographically separated.                |
|                 |                  | 7. Single parent.                                                                  |

Appendix C

4

# Appendix C

| Variable Number | Statement Number | Statement                                                                       | Variable Number | Statement Number | Statement                                                                |
|-----------------|------------------|---------------------------------------------------------------------------------|-----------------|------------------|--------------------------------------------------------------------------|
| 009             | 6                | Your highest education level obtained is:                                       | 014             | 11               | Your work requires you to work primarily:                                |
|                 |                  | 1. Non-high school graduate                                                     |                 |                  | 1. Alone                                                                 |
|                 |                  | 2. High school graduate or GED                                                  |                 |                  | 2. With one or two people                                                |
|                 |                  | 3. Less than two years college                                                  |                 |                  | 3. As a small work group (3-5 people)                                    |
|                 |                  | 4. Two years or more college                                                    |                 |                  | 4. As a large work group (6 or more people)                              |
|                 |                  | 5. Bachelors Degree                                                             |                 |                  | 5. Other                                                                 |
|                 |                  | 6. Masters Degree                                                               |                 |                  |                                                                          |
|                 |                  | 7. Doctoral Degree                                                              |                 |                  |                                                                          |
| 010             | 7                | Highest level of professional military education (residence or correspondence): | 015             | 12               | What is your usual work schedule?                                        |
|                 |                  | 0. None or not applicable                                                       |                 |                  | 1. Day shift, normally stable hours                                      |
|                 |                  | 1. MCO Orientation Course or USAF Supervisor Course (MCO Phase 1 or 2)          |                 |                  | 2. Swing shift (about 1600-2400)                                         |
|                 |                  | 2. MCO Leadership School (MCO Phase 3)                                          |                 |                  | 3. Mid shift (about 2400-0800)                                           |
|                 |                  | 3. MCO Academy (MCO Phase 4)                                                    |                 |                  | 4. Rotating shift schedule                                               |
|                 |                  | 4. Senior MCO Academy (MCO Phase 5)                                             |                 |                  | 5. Day or shift work with irregular/unstable hours                       |
|                 |                  | 5. Squadron Officer School                                                      |                 |                  | 6. Frequent TBT/travel or frequently on-call to report to work           |
|                 |                  | 6. Intermediate Service School (i.e., ACSC, AFSC)                               |                 |                  | 7. Crew schedule                                                         |
|                 |                  | 7. Senior Service School (i.e., AUC, ICAF, IAC)                                 | 016             | 13               | How often does your supervisor hold group meetings?                      |
| 011             | 8                | How many people do you directly supervise?                                      |                 |                  | 1. Never                                                                 |
|                 |                  | 1. None                                                                         |                 |                  | 2. Occasionally                                                          |
|                 |                  | 2. 1                                                                            |                 |                  | 3. Monthly                                                               |
|                 |                  | 3. 2                                                                            |                 |                  | 4. Weekly                                                                |
|                 |                  | 4. 3                                                                            |                 |                  | 5. Daily                                                                 |
|                 |                  | 5. 4 to 5                                                                       |                 |                  | 6. Continuously                                                          |
|                 |                  | 6. 6 to 8                                                                       | 017             | 14               | How often are group meetings used to solve problems and establish goals? |
|                 |                  | 7. 9 or more                                                                    |                 |                  | 1. Never                                                                 |
| 012             | 9                | For how many people do you write performance reports?                           |                 |                  | 2. Occasionally                                                          |
|                 |                  | 1. None                                                                         |                 |                  | 3. About half the time                                                   |
|                 |                  | 2. 1                                                                            |                 |                  | 4. All of the time                                                       |
|                 |                  | 3. 2                                                                            | 018             | 15               | What is your aeronautical rating and current status?                     |
|                 |                  | 4. 3                                                                            |                 |                  | 1. Nonrated, not on aircraft                                             |
|                 |                  | 5. 4 to 5                                                                       |                 |                  | 2. Nonrated, now on aircraft                                             |
|                 |                  | 6. 6 to 8                                                                       |                 |                  | 3. Rated, in crew/operations job                                         |
|                 |                  | 7. 9 or more                                                                    |                 |                  | 4. Rated, in support job                                                 |
| 013             | 10               | Does your supervisor actually write your performance report?                    |                 |                  |                                                                          |
|                 |                  | 1. Yes                                                                          |                 |                  |                                                                          |
|                 |                  | 2. No                                                                           |                 |                  |                                                                          |
|                 |                  | 3. Not sure                                                                     |                 |                  |                                                                          |

Variable  
Number

Statement  
Number

16

Statement

Which of the following best describes your career or employment intentions?

1. Planning to retire in the next 12 months
2. Will continue in/with the Air Force as a career
3. Will most likely continue in/with the Air Force
4. May continue in/with the Air Force
5. Will most likely not make the Air Force a career
6. Will separate/terminate from the Air Force as soon as possible

NOTE: Variable 008, Statement 11 was added to the QAP on 19 Jan 80 and replaced variable 014 which appears on page 6. Although no longer used, Variable 014 is still shown because data collected from about 25,000 samples for this variable are still in the data base.

## FACTORS

Each 800 series factor consists of two or more variables which correspond to statements in the QAP. A mean score can be derived for each factor except 805, 807, 808, 809 and 825 by using a "straight average." The formula for computing the exceptions is indicated.

**FACTOR 800 - SKILL VARIETY:** Measures the degree to which a job requires a variety of different tasks or activities in carrying out the work; involves the use of a number of different skills and talents of the worker; skills required are valued by the worker.

| Variable<br>Number | Statement<br>Number | Statement |
|--------------------|---------------------|-----------|
|--------------------|---------------------|-----------|

201

17

To what extent does your job require you to do many different things, using a variety of your talents and skills?

212

29

To what extent does your job require you to use a number of complex skills?

**FACTOR 801 - TASK IDENTIFY:** Measures the degree to which the job requires completion of a "whole" and identifiable piece of work from beginning to end.

| Variable<br>Number | Statement<br>Number | Statement |
|--------------------|---------------------|-----------|
|--------------------|---------------------|-----------|

202

18

To what extent does your job involve doing a whole task or unit of work?

211

20

To what extent does your job provide you with a chance to finish completely the piece of work you have begun?

Appendix C

# Appendix C

**FACTOR 802 - TASK SIGNIFICANCE:** Measures the degree to which the job has a substantial impact on the lives of others; the importance of the job.

| Variable Number | Statement Number | Statement |
|-----------------|------------------|-----------|
|-----------------|------------------|-----------|

|     |    |                                                                                         |
|-----|----|-----------------------------------------------------------------------------------------|
| 203 | 19 | To what extent is your job significant in that it affects others in some important way? |
|-----|----|-----------------------------------------------------------------------------------------|

|     |    |                                                                 |
|-----|----|-----------------------------------------------------------------|
| 210 | 27 | To what extent does doing your job well affect a lot of people? |
|-----|----|-----------------------------------------------------------------|

## FACTOR 803 (NOT USED)

**FACTOR 804 - JOB FEEDBACK:** Measures the degree to which carrying out the work activities required by the job results in the worker obtaining clear and direct information about job outcomes or information on good and poor performance.

| Variable Number | Statement Number | Statement |
|-----------------|------------------|-----------|
|-----------------|------------------|-----------|

|     |    |                                                                                                             |
|-----|----|-------------------------------------------------------------------------------------------------------------|
| 272 | 22 | To what extent are you able to determine how well you are doing your job without feedback from anyone else? |
|-----|----|-------------------------------------------------------------------------------------------------------------|

|     |    |                                                                                                                                       |
|-----|----|---------------------------------------------------------------------------------------------------------------------------------------|
| 209 | 26 | To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work? |
|-----|----|---------------------------------------------------------------------------------------------------------------------------------------|

**FACTOR 805 - WORK SUPPORT:** Measures the degree to which work performance is hindered by additional duties, details, inadequate tools, equipment, or work space.

| Variable Number | Statement Number | Statement |
|-----------------|------------------|-----------|
|-----------------|------------------|-----------|

|     |    |                                                                                         |
|-----|----|-----------------------------------------------------------------------------------------|
| 206 | 23 | To what extent do additional duties interfere with the performance of your primary job? |
|-----|----|-----------------------------------------------------------------------------------------|

|     |    |                                                                                 |
|-----|----|---------------------------------------------------------------------------------|
| 207 | 24 | To what extent do you have adequate tools and equipment to accomplish your job? |
|-----|----|---------------------------------------------------------------------------------|

|     |    |                                                               |
|-----|----|---------------------------------------------------------------|
| 208 | 25 | To what extent is the amount of work space provided adequate? |
|-----|----|---------------------------------------------------------------|

Formula (8-206+207+208)/3

9

**FACTOR 806 - NEED FOR ENRICHMENT INDEX (JOB DESIRES):** Has to do with job related characteristics (autonomy, personal growth, use of skills, etc.) that the individual would like in a job.

| Variable Number | Statement Number | Statement |
|-----------------|------------------|-----------|
|-----------------|------------------|-----------|

(In my job, I would like to have the characteristics described--from "not at all" to "an extremely large amount")

|     |    |                                                |
|-----|----|------------------------------------------------|
| 249 | 51 | Opportunities to have independence in my work. |
|-----|----|------------------------------------------------|

|     |    |                           |
|-----|----|---------------------------|
| 250 | 52 | A job that is meaningful. |
|-----|----|---------------------------|

|     |    |                                                |
|-----|----|------------------------------------------------|
| 251 | 53 | The opportunity for personal growth in my job. |
|-----|----|------------------------------------------------|

|     |    |                                            |
|-----|----|--------------------------------------------|
| 252 | 54 | Opportunities in my work to use my skills. |
|-----|----|--------------------------------------------|

|     |    |                                              |
|-----|----|----------------------------------------------|
| 253 | 55 | Opportunities to perform a variety of tasks. |
|-----|----|----------------------------------------------|

**FACTOR 807 - JOB MOTIVATION INDEX:** A composite index derived from the six job characteristics that reflects the overall "motivating potential" of a job; the degree to which a job will prompt high internal work motivation on the part of job incumbents.

Index is computed using the following factors:

|     |                                |
|-----|--------------------------------|
| 800 | Skill variety                  |
| 801 | Task identity                  |
| 802 | Task significance              |
| 803 | Performance barriers/blockages |
| 813 | Task autonomy                  |
| 804 | Job feedback                   |

Formula (800+801+802+803)/4+813+804

**FACTOR 808 - QJI TOTAL SCORE:** Assesses one's perception of motivation provided by his or her job. This factor is a variation of a scale employed by other job motivation theorists.

Score is computed using the variables in the following formula:

Formula (Y201+Y202+Y203+Y270+Y271+Y272+Y208+Y207+Y206+Y209+Y210+Y211+Y212+Y213)

10

**FACTOR 809 - JOB MOTIVATION INDEX - ADDITIVE:** This factor is a variation of a scale employed by other job motivation theorists.

Index is computed using the following factors:

|     |                                |
|-----|--------------------------------|
| 800 | Skill variety                  |
| 801 | Task identity                  |
| 802 | Task significance              |
| 803 | Performance barriers/blockages |
| 813 | Task autonomy                  |
| 804 | Work repetition                |

Formula:  $(800+801+802+803)/4 \times 813 \div 804$

**FACTOR 810 - JOB PERFORMANCE GOALS:** Measures the extent to which job performance goals are clear, specific, realistic, understandable, and challenging.

| Variable Number | Statement Number | Statement                                                                          |
|-----------------|------------------|------------------------------------------------------------------------------------|
| 217             | 34               | To what extent do you know exactly what is expected of you in performing your job? |
| 218             | 35               | To what extent are your job performance goals difficult to accomplish?             |
| 273             | 36               | To what extent are your job performance goals clear?                               |
| 274             | 37               | To what extent are your job performance goals specific?                            |
| 221             | 38               | To what extent are your job performance goals realistic?                           |

**FACTOR 811 - PRIDE:** Measures the pride in one's work.

| Variable Number | Statement Number | Statement                                                  |
|-----------------|------------------|------------------------------------------------------------|
| 215             | 32               | To what extent are you proud of your job?                  |
| 275             | 46               | To what extent does your work give you a feeling of pride? |

11

**FACTOR 812 - TASK CHARACTERISTICS:** A combination of skill variety, task identity, task significance, and job feedback designed to measure several aspects of one's job.

| Variable Number | Statement Number | Statement                                                                                                                             |
|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 201             | 17               | To what extent does your job require you to do many different things, using a variety of your talents and skills?                     |
| 202             | 18               | To what extent does your job involve doing a whole task or unit of work?                                                              |
| 203             | 19               | To what extent is your job significant, in that it affects others in some important way?                                              |
| 272             | 22               | To what extent are you able to determine how well you are doing your job without feedback from anyone else?                           |
| 209             | 26               | To what extent does your job provide the chance to show for yourself when you do a good job, and to be responsible for your own work? |
| 210             | 27               | To what extent does doing your job well affect a lot of people?                                                                       |
| 211             | 28               | To what extent does your job provide you with a chance to finish completely the piece of work you have begun?                         |
| 212             | 29               | To what extent does your job require you to use a number of complex skills?                                                           |

**FACTOR 813 - TASK AUTONOMY:** Measures the degree to which the job provides freedom to do the work as one sees fit; discretion in scheduling, decision making, and means for accomplishing a job.

| Variable Number | Statement Number | Statement                                                                                                                        |
|-----------------|------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 270             | 20               | To what extent does your job provide a great deal of freedom and independence in scheduling your work?                           |
| 271             | 21               | To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it? |
| 213             | 30               | To what extent does your job give you freedom to do your work as you see fit?                                                    |
| 214             | 31               | To what extent are you allowed to make the major decisions required to perform your job well?                                    |

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Appendix C

# Appendix C

**FACTOR 814 - WORK REPETITION:** Measures the extent to which one performs the same tasks or faces the same type of problems in his or her job on a regular basis.

| Variable Number | Statement Number | Statement                                                                              |
|-----------------|------------------|----------------------------------------------------------------------------------------|
| 226             | 39               | To what extent do you perform the same tasks repeatedly within a short period of time? |
| 227             | 40               | To what extent are you faced with the same type of problem on a weekly basis?          |

**FACTOR 815 (NOT USED)**

**FACTOR 816 - DESIRED REPETITIVE TASKS:** Measures the extent to which one desires his or her job involve repetitive tasks or tasks that are easy to accomplish.

| Variable Number | Statement Number | Statement                                               |
|-----------------|------------------|---------------------------------------------------------|
| 255             | 56               | A job in which tasks are repetitive.                    |
| 258             | 57               | A job in which tasks are relatively easy to accomplish. |

**FACTOR - JOB INFLUENCES (NOT A STATISTICAL FACTOR):**

| Variable Number | Statement Number | Statement                                                                               |
|-----------------|------------------|-----------------------------------------------------------------------------------------|
| 216             | 33               | To what extent do you feel accountable to your supervisor in accomplishing your job?    |
| 238             | 42               | To what extent do co-workers in your work group maintain high standards of performance? |

**FACTOR 817 - ADVANCEMENT/RECOGNITION:** Measures one's awareness of advancement and recognition, and feelings of being prepared (i.e., learning new skills for promotion).

| Variable Number | Statement Number | Statement                                                                            |
|-----------------|------------------|--------------------------------------------------------------------------------------|
| 234             | 41               | To what extent are you aware of promotion/advancement opportunities that affect you? |
| 239             | 43               | To what extent do you have the opportunity to progress up your career ladder?        |

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|     |    |                                                                                                         |
|-----|----|---------------------------------------------------------------------------------------------------------|
| 240 | 44 | To what extent are you being prepared to accept increased responsibility?                               |
| 241 | 45 | To what extent do people who perform well receive recognition?                                          |
| 276 | 47 | To what extent do you have the opportunity to learn skills which will improve your promotion potential? |

**FACTOR 818 - MANAGEMENT AND SUPERVISION (A):** Measures the degree to which the worker has high performance standards and good work procedures. Measures support and guidance received, and the overall quality of supervision.

| Variable Number | Statement Number | Statement                                                       |
|-----------------|------------------|-----------------------------------------------------------------|
| 404             | 58               | My supervisor is a good planner.                                |
| 405             | 59               | My supervisor sets high performance standards.                  |
| 410             | 60               | My supervisor encourages teamwork.                              |
| 411             | 61               | My supervisor represents the group at all times.                |
| 412             | 62               | My supervisor establishes good work procedures.                 |
| 413             | 63               | My supervisor has made his responsibilities clear to the group. |
| 445             | 64               | My supervisor fully explains procedures to each group member.   |
| 416             | 65               | My supervisor performs well under pressure.                     |

**FACTOR - MANAGEMENT AND SUPERVISION (B): (NOT A STATISTICAL FACTOR)**

| Variable Number | Statement Number | Statement                                                    |
|-----------------|------------------|--------------------------------------------------------------|
| 424             | 66               | My supervisor takes time to help me when needed.             |
| 434             | 71               | My supervisor lets me know when I am doing a poor job.       |
| 439             | 75               | When I need technical advice, I usually go to my supervisor. |

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**FACTOR 819 - SUPERVISORY COMMUNICATIONS CLIMATE:** Measures the degree to which the writer perceives that there is good rapport with supervisors; that there is a good working environment, that innovation for task improvement is encouraged, and that rewards are based upon performance.

| Variable Number | Statement Number | Statement                                                                    |
|-----------------|------------------|------------------------------------------------------------------------------|
| 426             | 67               | My supervisor asks members for their ideas on task improvements.             |
| 428             | 68               | My supervisor explains how my job contributes to the overall mission.        |
| 431             | 69               | My supervisor helps me set specific goals.                                   |
| 433             | 70               | My supervisor lets me know when I am doing a good job.                       |
| 435             | 72               | My supervisor always helps me improve my performance.                        |
| 436             | 73               | My supervisor insures that I get job related training when needed.           |
| 437             | 74               | My job performance has improved due to feedback received from my supervisor. |
| 442             | 76               | My supervisor frequently gives me feedback on how well I am doing my job.    |

**FACTOR 820 - ORGANIZATIONAL COMMUNICATIONS CLIMATE:** Measures the degree to which the writer perceives that there is an open communications environment in the organization, and that adequate information is provided to accomplish the job.

| Variable Number | Statement Number | Statement                                                                                          |
|-----------------|------------------|----------------------------------------------------------------------------------------------------|
| 300             | 82               | Ideas developed by my work group are readily accepted by management personnel above my supervisor. |
| 301             | 83               | My organization provides all the necessary information for me to do my job effectively.            |
| 302             | 84               | My organization provides adequate information to my work group.                                    |
| 303             | 85               | My work group is usually aware of important events and situations.                                 |
| 304             | 86               | My complaints are aired satisfactorily.                                                            |
| 309             | 91               | The information in my organization is widely shared so that those needing it have it available.    |

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- 314 96 My organization has clear-cut goals.
- 317 99 The goals of my organization are reasonable.
- 318 100 My organization provides accurate information to my work group.

**FACTOR 821 - WORK GROUP EFFECTIVENESS:** Measures one's view of the quantity, quality, and efficiency of work generated by his or her work group.

| Variable Number | Statement Number | Statement                                                                                                                                                                      |
|-----------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 259             | 77               | The quantity of output of your work group is very high.                                                                                                                        |
| 260             | 78               | The quality of output of your work group is very high.                                                                                                                         |
| 261             | 79               | When high priority work arises, such as short suspenses, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations. |
| 264             | 80               | Your work group always gets maximum output from available resources (e.g., personnel and material).                                                                            |
| 265             | 81               | Your work group's performance in comparison to similar work groups is very high.                                                                                               |

**FACTOR - WORK INTERFERENCES (NOT A STATISTICAL FACTOR):** Identifies things that impede an individual's job performance.

| Variable Number | Statement Number | Statement                                                                                                                                   |
|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 277             | 48               | To what extent do you have the necessary supplies to accomplish your job?                                                                   |
| 278             | 49               | To what extent do details (task not covered by primary or additional duty descriptions) interfere with the performance of your primary job? |
| 279             | 50               | To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?                       |

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# Appendix C

FACTOR 822 - JOB RELATED SATISFACTION: Measures the degree to which the worker is generally satisfied with factors surrounding the job.

| Variable Number | Statement Number | Statement                                                                                                                                                                                              |
|-----------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 705             | 101              | Feeling of helpfulness<br>The chance to help people and improve their welfare through the performance of my job.<br>The importance of my job performance to the welfare of others.                     |
| 709             | 102              | Co-worker Relationships<br>My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers. |
| 710             | 103              | Family Attitude Toward Job<br>The recognition and the pride my family has in the work I do.                                                                                                            |
| 717             | 106              | Work Schedule<br>My work schedule; flexibility and regularity of my work schedule; the number of hours I work per week.                                                                                |
| 718             | 107              | Job Security                                                                                                                                                                                           |
| 719             | 108              | Acquired Valuable Skills<br>The chance to acquire valuable skills in my job which prepare me for future opportunities                                                                                  |
| 723             | 109              | My Job as a Whole                                                                                                                                                                                      |

FACTOR 823 - JOB RELATED TRAINING: Measures the extent to which one is satisfied with on-the-job and technical training received.

| Variable Number | Statement Number | Statement                                                                                                |
|-----------------|------------------|----------------------------------------------------------------------------------------------------------|
| 711             | 104              | On-the-Job Training (OJT)<br>The OJT instructional methods and instructors' competence.                  |
| 712             | 105              | Technical Training (Other than OJT)<br>The technical training I have received to perform my current job. |

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FACTOR 824 - GENERAL ORGANIZATIONAL CLIMATE: Measures the individual's perception of his or her organizational environment as a whole (i.e. spirit of teamwork, communications, organizational pride, etc.).

| Variable Number | Statement Number | Statement                                                                                   |
|-----------------|------------------|---------------------------------------------------------------------------------------------|
| 305             | 87               | My organization is very interested in the attitudes of the group members toward their jobs. |
| 306             | 88               | My organization has a very strong interest in the welfare of its people.                    |
| 307             | 89               | I am very proud to work for this organization.                                              |
| 308             | 90               | I feel responsible to my organization in accomplishing its mission.                         |
| 310             | 92               | Personnel in my unit are recognized for outstanding performance.                            |
| 311             | 93               | I am usually given the opportunity to show or demonstrate my work to others.                |
| 312             | 94               | There is a high spirit of teamwork among my co-workers.                                     |
| 313             | 95               | There is outstanding cooperation between work groups of my organization.                    |
| 315             | 97               | I feel motivated to contribute my best efforts to the mission of my organization.           |
| 316             | 98               | My organization rewards individuals based on performance.                                   |

FACTOR 825 - MOTIVATION POTENTIAL SCORE: This factor is another variation of a scale employed by other job motivation theorists. The score ranges between 1 and 343 with 109 being the Air Force average. Low scores indicate a poorly motivating job. Score is computed using the following factors:

|     |                   |
|-----|-------------------|
| 800 | Skill variety     |
| 801 | Task identity     |
| 802 | Task significance |
| 804 | Job feedback      |
| 813 | Task autonomy     |

Formula:  $(800+801+802)/3 + 813 \times 804$

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# VARIABLES

| Variable Number                                                                                                                       | Factor  | Statement Number |
|---------------------------------------------------------------------------------------------------------------------------------------|---------|------------------|
| 201                                                                                                                                   | 800/812 | 17               |
| To what extent does your job require you to do many different things, using a variety of your talents and skills?                     |         |                  |
| 202                                                                                                                                   | 801/812 | 18               |
| To what extent does your job involve doing a whole task or unit of work?                                                              |         |                  |
| 203                                                                                                                                   | 802/812 | 19               |
| To what extent is your job significant, in that it affects others in some important way?                                              |         |                  |
| 204 & 205                                                                                                                             | --      | --               |
| (Not used)                                                                                                                            |         |                  |
| 206                                                                                                                                   | 805     | 23               |
| To what extent do additional duties interfere with the performance of your primary job?                                               |         |                  |
| 207                                                                                                                                   | 805     | 24               |
| To what extent do you have adequate tools and equipment to accomplish your job?                                                       |         |                  |
| 208                                                                                                                                   | 805     | 25               |
| To what extent is the amount of work space provided adequate?                                                                         |         |                  |
| 209                                                                                                                                   | 804/812 | 26               |
| To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work? |         |                  |
| 210                                                                                                                                   | 802/812 | 27               |
| To what extent does doing your job well affect a lot of people?                                                                       |         |                  |
| 211                                                                                                                                   | 801/812 | 28               |
| To what extent does your job provide you with a chance to finish completely the piece of work you have begun?                         |         |                  |
| 212                                                                                                                                   | 800/812 | 29               |
| To what extent does your job require you to use a number of complex skills?                                                           |         |                  |

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| Variable Number                                                                               | Factor | Statement Number |
|-----------------------------------------------------------------------------------------------|--------|------------------|
| 213                                                                                           | 813    | 30               |
| To what extent does your job give you freedom to do your work as you see fit?                 |        |                  |
| 214                                                                                           | 813    | 31               |
| To what extent are you allowed to make the major decisions required to perform your job well? |        |                  |
| 215                                                                                           | 811    | 32               |
| To what extent are you proud of your job?                                                     |        |                  |
| 216*                                                                                          | --     | 33               |
| To what extent do you feel accountable to your supervisor in accomplishing your job?          |        |                  |
| 217                                                                                           | 810    | 34               |
| To what extent do you know exactly what is expected of you in performing your job?            |        |                  |
| 218                                                                                           | 810    | 35               |
| To what extent are your job performance goals difficult to accomplish?                        |        |                  |
| 219 & 220                                                                                     | --     | --               |
| (Not used)                                                                                    |        |                  |
| 221                                                                                           | 810    | 38               |
| To what extent are your job performance goals realistic?                                      |        |                  |
| 222-225                                                                                       | --     | --               |
| (Not used)                                                                                    |        |                  |
| 226                                                                                           | 814    | 39               |
| To what extent do you perform the same tasks repeatedly within a short period of time?        |        |                  |
| 227                                                                                           | 814    | 40               |
| To what extent are you faced with the same type of problem on a weekly basis?                 |        |                  |

\* This variable is an element of "Job Influences" (not a statistical factor).

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# Appendix C

| Variable Number | Factor | Statement Number | Statement                                                                               | Variable Number | Factor  | Statement Number | Statement                                                                                                                                                                      |
|-----------------|--------|------------------|-----------------------------------------------------------------------------------------|-----------------|---------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 228-233         | --     | --               | (Not used)                                                                              | 256 & 257       | --      | --               | (Not used)                                                                                                                                                                     |
| 234             | 817    | 41               | To what extent are you aware of promotion/advancement opportunities that affect you?    | 258             | 816     | 57               | A job in which tasks are relatively easy to accomplish.                                                                                                                        |
| 235-237         | --     | --               | (Not used)                                                                              | 259             | 821     | 77               | The quantity of output of your work group is very high.                                                                                                                        |
| 238*            | --     | 42               | To what extent do co-workers in your work group maintain high standards of performance? | 260             | 821     | 78               | The quality of output of your work group is very high.                                                                                                                         |
| 239             | 817    | 43               | To what extent do you have the opportunity to progress up your career ladder?           | 261             | 821     | 79               | When high priority work arises, such as short suspenses, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations. |
| 240             | 817    | 44               | To what extent are you being prepared to accept increased responsibility?               | 262 & 263       | --      | --               | (Not used)                                                                                                                                                                     |
| 241             | 817    | 45               | To what extent do people who perform well receive recognition?                          | 264             | 821     | 80               | Your work group always gets maximum output from available resources (e.g., personnel and material).                                                                            |
| 242-248         | --     | --               | (Not used)                                                                              | 265             | 821     | 81               | Your work group's performance in comparison to similar work groups is very high.                                                                                               |
| 249             | 806    | 51               | Opportunities to have independence in my work?                                          | 266-269         | --      | --               | (Not used)                                                                                                                                                                     |
| 250             | 806    | 52               | A job that is meaningful.                                                               | 270             | 813     | 20               | To what extent does your job provide a great deal of freedom and independence in scheduling your work?                                                                         |
| 251             | 806    | 53               | The opportunity for personal growth in my job.                                          | 271             | 813     | 21               | To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it?                                               |
| 252             | 806    | 54               | Opportunities in my work to use my skills.                                              | 272             | 804/812 | 22               | To what extent are you able to determine how well you are doing your job without feedback from anyone else?                                                                    |
| 253             | 806    | 55               | Opportunities to perform a variety of tasks.                                            |                 |         |                  |                                                                                                                                                                                |
| 254             | --     | --               | (Not used)                                                                              |                 |         |                  |                                                                                                                                                                                |
| 255             | 816    | 56               | A job in which tasks are repetitive.                                                    |                 |         |                  |                                                                                                                                                                                |

\* This variable is an element of "job influences" (not a statistical factor).

| Variable Number | Factor | Statement Number |
|-----------------|--------|------------------|
|-----------------|--------|------------------|

|         |     |    |
|---------|-----|----|
| 273     | 810 | 36 |
| 274     | 810 | 37 |
| 275     | 811 | 46 |
| 276     | 817 | 47 |
| 277**   | --  | 49 |
| 278**   | --  | 49 |
| 279**   | --  | 50 |
| 280-299 | --  | -- |
| 300     | 820 | 82 |
| 301     | 820 | 83 |
| 302     | 820 | 94 |

Statement

To what extent are your job performance goals clear?

To what extent are your job performance goals specific?

To what extent does your work give you a feeling of pride?

To what extent do you have the opportunity to learn skills which will improve your promotion potential?

To what extent do you have the necessary supplies to accomplish your job?

To what extent do details (task not covered by primary or additional duty descriptions) interfere with the performance of your primary job?

To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?

(Not used)

Ideas developed by my work group are readily accepted by management personnel above my supervisor.

My organization provides all the necessary information for me to do my job effectively.

My organization provides adequate information to my work group.

\*\* These variables are elements of "work interferences" (not a statistical factor).

| Variable Number | Factor | Statement Number |
|-----------------|--------|------------------|
|-----------------|--------|------------------|

|     |     |    |
|-----|-----|----|
| 303 | 820 | 85 |
| 304 | 820 | 86 |
| 305 | 824 | 87 |
| 306 | 824 | 88 |
| 307 | 824 | 89 |
| 308 | 824 | 90 |
| 309 | 820 | 91 |
| 310 | 824 | 92 |
| 311 | 824 | 93 |
| 312 | 824 | 94 |
| 313 | 824 | 95 |

Statement

My work group is usually aware of important events and situations.

My complaints are aired satisfactorily.

My organization is very interested in the attitudes of the group members toward their jobs.

My organization has a very strong interest in the welfare of its people.

I am very proud to work for this organization.

I feel responsible to my organization in accomplishing its mission.

The information in my organization is widely shared so that those needing it have it available.

Personnel in my unit are recognized for outstanding performance.

I am usually given the opportunity to show or demonstrate my work to others.

There is a high spirit of teamwork among my co-workers.

There is outstanding cooperation between work groups of my organization.

# Appendix

| Variable Number                                                                         | Factor | Statement                                                                          | Statement Number |
|-----------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------------|------------------|
| 314                                                                                     | 820    | My organization has clear-cut goals.                                               | 96               |
| 315                                                                                     | 824    | I feel motivated to contribute my best efforts to the mission of my organization.. | 97               |
| 316                                                                                     | 824    | My organization rewards individuals based on performance.                          | 98               |
| 317                                                                                     | 820    | The goals of my organization are reasonable.                                       | 99               |
| 318                                                                                     | 820    | My organization provides accurate information to my work group.                    | 100              |
| 319-403                                                                                 | --     | (Not used)                                                                         | --               |
| 404                                                                                     | 818    | My supervisor is a good planner.                                                   | 58               |
| 405                                                                                     | 818    | My supervisor sets high performance standards.                                     | 59               |
| 406-409                                                                                 | --     | (Not used)                                                                         | --               |
| 410                                                                                     | 818    | My supervisor encourages teamwork.                                                 | 60               |
| 411                                                                                     | 818    | My supervisor represents the group at all times.                                   | 61               |
| 412                                                                                     | 818    | My supervisor establishes good work procedures.                                    | 62               |
| 413                                                                                     | .      | My supervisor has made his responsibilities clear to the group.                    | 63               |
| 414 & 415                                                                               | --     | (Not used)                                                                         | --               |
| 416                                                                                     | 818    | My supervisor performs well under pressure.                                        | 65               |
| 417-423                                                                                 | --     | (Not used)                                                                         | --               |
| 424***                                                                                  | --     | My supervisor takes time to help me when needed.                                   | 66               |
| 425                                                                                     | --     | (Not used)                                                                         | --               |
| *** This variable is an element of "supervisory assistance" (not a statistical factor). |        |                                                                                    |                  |

| Variable Number                                                                          | Factor | Statement                                                                    | Statement Number |
|------------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------|------------------|
| 426                                                                                      | 819    | My supervisor asks members for their ideas, task improvements.               | 67               |
| 427                                                                                      | --     | (Not used)                                                                   | --               |
| 428                                                                                      | 819    | My supervisor explains how my job contributes to the overall mission.        | 68               |
| 429 & 430                                                                                | --     | (Not used)                                                                   | --               |
| 431                                                                                      | 819    | My supervisor helps me set specific goals.                                   | 69               |
| 432                                                                                      | --     | (Not used)                                                                   | --               |
| 433                                                                                      | 819    | My supervisor lets me know when I am doing a good job.                       | 70               |
| 434***                                                                                   | --     | My supervisor lets me know when I am doing a poor job.                       | 71               |
| 435                                                                                      | 819    | My supervisor always helps me improve my performance.                        | 72               |
| 436                                                                                      | 819    | My supervisor insures that I get job related training when needed.           | 73               |
| 437                                                                                      | 819    | My job performance has improved due to feedback received from my supervisor. | 74               |
| 438                                                                                      | --     | (Not used)                                                                   | --               |
| 439***                                                                                   | --     | When I need technical advice, I usually go to my supervisor.                 | 75               |
| 440 & 441                                                                                | --     | (Not used)                                                                   | --               |
| 442                                                                                      | 819    | My supervisor frequently gives me feedback on how well I am doing my job.    | 76               |
| 443 & 444                                                                                | --     | (Not used)                                                                   | --               |
| 445                                                                                      | 818    | My supervisor fully explains procedures to each group member.                | 64               |
| 446-704                                                                                  | --     | (Not used)                                                                   | --               |
| *** These variables are elements of "supervisory assistance" (not a statistical factor). |        |                                                                              |                  |

| <u>Variable Number</u> | <u>Factor</u> | <u>Statement Number</u> | <u>Statement</u>                                                                                                                                                                                              |
|------------------------|---------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 705                    | 822           | 101                     | <u>Feeling of Helpfulness</u><br>The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others.                        |
| 706-708                | --            | --                      | (Not used)                                                                                                                                                                                                    |
| 709                    | 822           | 102                     | <u>Co-worker Relationships</u><br>My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers. |
| 710                    | 822           | 103                     | <u>Family Attitude Toward Job</u><br>The recognition and the pride my family has in the work I do.                                                                                                            |
| 711                    | 823           | 104                     | <u>On-the-Job Training (OJT)</u><br>The OJT instructional methods and instructors' competence.                                                                                                                |
| 712                    | 823           | 105                     | <u>Technical Training (Other than OJT)</u><br>The technical training I have received to perform my current job.                                                                                               |
| 713-716                | --            | --                      | (Not used)                                                                                                                                                                                                    |
| 717                    | 822           | 106                     | <u>Work Schedule</u><br>My work schedule; flexibility and regularity of my work schedule; the number of hours I work per week.                                                                                |
| 718                    | 822           | 107                     | <u>Job Security</u>                                                                                                                                                                                           |
| 719                    | 822           | 108                     | <u>Acquired Valuable Skills</u><br>The chance to acquire valuable skills in my job which prepare me for future opportunities.                                                                                 |
| 720-722                | --            | --                      | (Not used)                                                                                                                                                                                                    |
| 723                    | 822           | 109                     | <u>My Job as a Whole</u>                                                                                                                                                                                      |
| 724-999                | --            | --                      | (Not used)                                                                                                                                                                                                    |

END

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