RELATIONSHIP BETWEEN ROLE STRESS AND INDIVIDUAL AND ENVIRONMENTAL ...
RELATIONSHIP BETWEEN PERCEPTIONS OF ROLE STRESS AND INDIVIDUAL, ORGANIZATIONAL, AND ENVIRONMENTAL VARIABLES

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The present study investigated the relationships between various individual and organizational variables and perceptions of role stress. Role stress can be of two types: (1) role conflict, which results when an individual has incompatible demands made upon him; and (2) role ambiguity, which exists when an individual is uncertain of what is expected of him. Questionnaires designed to measure role stress, organizational climate, job characteristics, values, managerial practices, and organizational effectiveness were administered to a sample of 1607 employees drawn from all
hierarchical levels at four Public Works Centers (PWCs) in the U.S. (including Pearl Harbor), the PWC in Yokosuka, Japan; and the PWC at Subic Bay, Philippines.

Results revealed that (1) workers perceived more role ambiguity than supervisory personnel; (2) perceptions of role stress differed across cultures, but differences were not related to specific cultural values; (3) role stress was related to organizational climate, job characteristics, and managerial and supervisory practices; (4) role ambiguity was more strongly related to organizational climate and general job characteristics, whereas role conflict was more strongly related to specific job characteristics; (5) role ambiguity, unlike role conflict, was a substantial contributor in predicting intrinsic satisfaction; and (6) role ambiguity was related to workers' perceptions of work center performance.
FOREWORD

This research and development was conducted for the Naval Facilities Engineering Command in support of Exploratory Development Task Area ZF55.521.034 (Civilian Personnel Research and Development), Work Unit 03.02 (Evaluation of Civilian Personnel Management). The objective of this work unit is to identify and evaluate the managerial practices used in Navy organizations staffed primarily with civilians. The purpose of this study, which was conducted at six of the Navy's Public Works Centers (PWCs), was to determine how Navy civilian employees' perceptions of various aspects of the work environment differ across cultural and ethnic groups and across hierarchical levels. A better understanding of these differences should enable Navy planners and policymakers to improve civilian personnel management.

This is the second report published concerning this study. The first (TR 79-9) described the interrelationships between cultural and work-related values and attitudes with respect to organizational functioning. This report addresses the relationships between employee perceptions of role stress and individual, organizational, and environmental variables. The third report in the series will address the relationships between managerial practices and organizational outcome variables, and the fourth (and final) will provide an executive summary of the previous findings.

Although results of this report are primarily intended for use by the Navy Facilities Engineering Command, they may be generalizable to other shore support activities. Also, they should be of interest to researchers studying role stress.

Appreciation is extended to the commanding officers of the PWCs and their staffs, for their general support and cooperation.

DONALD F. PARKER
Commanding Officer
SUMMARY

Problem

Because of the high cost of human resources, increasing pressure has been placed on Navy planners and policy makers to reduce manpower costs without undermining the Navy's goals and operational requirements. Thus, one of the major challenges facing the Navy today is to provide for more effective personnel management. Results of research conducted within the private sector indicated that role stress had adverse effects on organizational functioning as well as on employee satisfaction, performance, and retention. In light of these findings, studying role stress among Navy civilian employees and defining its relationship to individual, organizational, and environmental variables should provide clues for improving personnel management.

Purpose

The purpose of this study was to determine (1) whether perceptions of role stress differ across hierarchical levels within organizations, (2) whether type and degree of perceived role stress differ across cultural settings, (3) how role stress relates to personal and work values, (4) how role stress relates to various organizational variables (e.g., organizational climate, managerial practices, characteristics of supervision, and job characteristics), and (5) whether role ambiguity and role conflict relate differently to job satisfaction and performance across levels.

Approach

Although the Navy's Public Works Centers (PWCs) are similar as to tasking, technology used, organizational structure, and managerial background, they differ as to the surrounding physical and social environments as well as in the ethnic and cultural composition of the labor force and supervisors. Thus, they were chosen as a logical environment in which to conduct this study.

Two questionnaire forms were designed—one for the workers and the other for the managers/supervisors. The forms included items designed to measure role stress, cultural and work values, organizational climate, job characteristics, supervisory influence, perceptions of supervisors, managerial practices, job satisfaction, and work center effectiveness. Questionnaires were administered to a sample of 1607 employees drawn from all hierarchical levels at six PWCs—four in the United States (including PWC Pearl Harbor); one at Subic Bay, Philippines; and one at Yokosuka, Japan. Results were analyzed to determine relationships among the two measures of role stress—role ambiguity and role conflict—and various organizational/environmental variables. Role ambiguity occurs when an individual is not sure of what is expected of him because of unclear or vague directions; and role conflict, when he has demands made of him that are incompatible with his role or values.

Results and Conclusions

1. Moderate amounts of both role ambiguity and role conflict were reported by employees at all hierarchical levels and at all center locations. In contrast to previous findings, however, workers reported more role ambiguity than supervisory personnel.

2. Although perceptions of role ambiguity and role conflict differed across hierarchical levels and center locations, these differences were not related to cultural or job values.
3. Perceptions of role ambiguity and role conflict were related to organizational climate, job characteristics, and supervisory practices. Role ambiguity, however, was more strongly related to organizational climate and general job characteristics; and role conflict, to specific job characteristics.

4. The best predictors of role ambiguity for workers were perceptions of job challenge and, for supervisors, perceptions of openness in organizational climate. The best predictors of role conflict for workers were perceptions of organizational problems and, for supervisors, perceptions of esprit de corps.

5. For both workers and supervisors, the best predictors of intrinsic satisfaction were perceptions of esprit de corps and role ambiguity; and the best predictors of work center performance, openness in organizational climate.

Recommendations

1. Workers at the Public Works Centers (PWCs) expressed more role ambiguity than did those in supervisory and managerial positions. Therefore, they should be provided with accurate and timely information concerning their work and supervisors should provide sufficient guidelines for successful job completion.

2. In general, managers expressed more role conflict than workers, which may be because of time pressures to complete work. Since these pressures are increased when coordination problems lead to manpower waste, material problems, and planning or scheduling difficulties, steps should be taken to ensure the accuracy of inputs to the control system, which is responsible for disseminating planning and scheduling reports.

3. Workers who perceive their supervisor as more competent, more supportive, and less biased experience less role stress. Thus, to ensure that supervisors have these qualities, selection criteria for supervisors should be revised to include interpersonal skills; supervisory training should be provided to improve existing technical, managerial, and interpersonal competence; and performance standards established for supervisors should be expanded to include personnel management responsibilities.

4. Perceptions of role ambiguity were related to organizational climate (e.g., openness) and to general job characteristics (e.g., reward contingencies). Thus, the timing and form of communication provided by the control system should be improved to ensure that (a) employees perceive supervisors as willing to provide and receive information and (b) employees receive accurate feedback about their performance.

5. Since role stress was related to supervisors' perceptions of managerial practices (e.g., flow of communication, derogation of workers, and bypassing of supervision), managers should be made aware of the possible effect of their policies and procedures on worker attitudes and performance.

6. To ensure that supervisors have realistic expectations concerning their influence, the amount of such influence appropriate for different tasks should be clearly defined.
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INTRODUCTION

Problem

Because of the high cost of human resources, increasing pressure has been placed on Navy planners and policy makers to reduce manpower costs without undermining the Navy's goals and operational requirements. Thus, one of the major challenges facing the Navy today is to provide for more effective personnel management.

Results of research conducted within the private sector (e.g., Kahn, Wolfe, Quinn, Shoek, & Rosenthal, 1964) indicate that role stress has adverse effects on organizational functioning as well as on employee satisfaction, performance, and retention. In light of these findings, studying role stress among Navy civilian employees and defining its relationship to individual, organizational, and environmental variables should provide clues for improving personnel management.

Background

Effects of Role Stress

Rizzo, House, and Lirtzman (1970) conceptualized role stress as being composed of two components—role conflict and role ambiguity. Role conflict results when an individual has demands made of him that are incompatible with his role or values; and role ambiguity, when he is not sure of what is expected of him because of unclear or vague directions. Kahn et al. (1964) surveyed a national sample of male employees and found that 35 percent had no clear idea of the scope or responsibility of their job. Also, they found that high levels of role conflict and role ambiguity were related to low degrees of job satisfaction and confidence in the organization, and to a high degree of job-related tension. Greene and Organ (1973) reported significant negative relationships between role conflict, role ambiguity, and ratings of employee performance. This is consistent with Johnson and Graen (1973), who found that employees who had left the organization tended to report higher levels of supervisor ambiguity and higher levels of role conflict while at their job than did those still working within the organization.

Investigators also have studied the differential effects of role ambiguity and role conflict. Rizzo et al. (1970) found that individuals who experience role ambiguity were less satisfied than those who experience role conflict. Although most of the organizational variables they measured were more highly correlated with role ambiguity than with role conflict, the following organizational practices were significantly associated with both types of role stress: (1) delays in decision-making, (2) distortion or suppression of information, and (3) violations of the chain of command.

Tosi (1971) examined some aspects of a role-taking model proposed by Kahn et al. (1964). He found that role conflict was positively related to job threat and anxiety and negatively related to job satisfaction, while role ambiguity was of lesser importance.

In summary, role stress appears to be related to decreased performance and lowered satisfaction. The type and degree of role stress experienced, however, may vary as a function of moderating variables.

Moderating Variables

It has been hypothesized that one or more variables may influence or moderate the differential effects of role ambiguity and role conflict on individual and organizational
variables. For example, the hierarchical level in an organization where an employee resides is likely to affect the type and degree of pressure put upon him, which, in turn, are likely to affect the way he perceives the organization and the job. For example, Kahn et al. (1964), in their theory of role dynamics, hypothesized that employees at higher levels in an organization would be less concerned with role conflict than role ambiguity, simply because they have a means to reduce sources of role conflict (e.g., by modifying rules or regulations).

Schuler (1975, 1977a), in a study of employees of a manufacturing firm, found that role ambiguity was more negatively related to job satisfaction than was role conflict for higher level employees, and that the reverse was true for lower level employees. Further, he concluded that participation in decision-making should be considered as a moderating variable in the relationship between role perceptions and employee satisfaction (1977a). Although he hypothesized that employee ability could also affect the relationship between role perceptions, satisfaction, and performance, this hypothesis was not supported (1977b).

Hammer and Tosi (1974), in an investigation of the effects of role stress on high-level managers, found that role conflict was not related to job satisfaction, but that there was a significant negative correlation between role ambiguity and job satisfaction. They found that higher level jobs were characterized by ambiguous situations and unstructured problems, which supports the previous finding that managers are more concerned with role ambiguity than with role conflict (Kahn et al., 1964). In contrast, Miles (1976), who examined the relationships between personal outcomes (e.g., tension, dissatisfaction, propensity to leave) and role stress across five hierarchical levels, found that such relationships were not moderated by organizational level.

Other studies suggest curvilinear relationships between hierarchical level and role stress. Wispe and Thayer (1957) found that assistant managers in an insurance corporation were more concerned with role ambiguity than were either managers or agents. Roethlisberger (1945) suggested that those at higher organizational levels will typically be more affected by role ambiguity; and those at middle levels, by role conflict. He describes the plight of the foreman who must try to satisfy his boss, to follow rules and policies set up by top management, and to handle requests for help and complaints from his subordinates and workers. Since foreman generally are not trained to handle or respond to conflicting expectations of workers and management, the discrepancy between their perceptions of what a foreman should be and what he actually is can be both disconcerting and dissatisfying. In another study of foremen, Charters (1952) found that conflicting expectations were negatively related to feelings of being "caught in the middle" only if (1) foremen interacted with the workers and management personnel who have the conflicting expectations, (2) they accurately perceived the contradictory nature of the expectations, and (3) they were motivated to conform to the expectations of both workers and management. Many foremen who felt "in the middle" accepted the situation as a legitimate aspect of their jobs and were neither insecure nor discontent. If, however, foremen felt a need to respond to conflicting pressures, they were adversely affected by role stress.

It is apparent that there is no clear-cut relationship between hierarchical level and role stress. Some studies indicate a linear positive relationship, others indicate a nonmonotonic relationship, and still others show no relationship at all. This suggests that other variables may also be operating to modify the relationship between role stress and outcome variables.

In their theory of role dynamics, Kahn et al. (1964) include personality factors and motivational orientation as important determinants of role stress and the way people
react to it. Since the development of this theory, researchers have investigated personality and motivational characteristics and values in an attempt to better understand role stress. For example, Beehr, Walsh, and Taber (1976), in an investigation of the relationship between role stress and individual and organizational values, found that role ambiguity, role conflict, and role overload were related to individual values concerning fatigue, tension, and job dissatisfaction. Keller (1975) hypothesized that role conflict and role ambiguity would be negatively related to dimensions of job satisfaction and that personality-related values would be related to role conflict, role ambiguity, and job satisfaction. He found that role conflict was negatively related to three dimensions of job satisfaction: supervision, pay, and promotions; and that role ambiguity was strongly negatively related to satisfaction with the work itself. No relationship was found, however, between personality-related values and either role stress or job satisfaction. The values investigated by Keller were those included in "The Study of Values Test" (Allport, Vernon, & Lindzey, 1960), which was designed to measure theoretical, economic, aesthetic, social, political, and religious values. Similarly, White and Ruh (1973) found no relationship between personal values and work-related dimensions. It could be argued that this occurred because the dimensions are somewhat abstract and removed from one's everyday work experiences. Finally, research has shown that the relationship between role stress and satisfaction measures is moderated by (1) autonomy and group cohesiveness (Beehr, 1976), (2) needs for achievement and independence (Johnson & Stinson, 1975), and (3) the need for clarity (Lyons, 1971).

In summary, personality-related values, unlike personal variables, have not been shown to be related to perceived role stress or to other job-related phenomena. This could be due either to the homogeneous value set adopted by most individuals working in organizations in the United States, where most of the studies of values have been conducted, or to the difficulties encountered in attaining accurate measures of individual values due to their abstract nature.

Purpose

The purpose of this study was to determine (1) whether perceptions of role stress differ across hierarchical levels within organizations, (2) whether type and degree of perceived role stress differ across cultural settings, (3) how role stress relates to personal and work values, (4) how role stress relates to various organizational variables (e.g., organizational climate, managerial practices, characteristics of supervision, and job characteristics), and (5) whether role ambiguity and role conflict relate differently to job satisfaction and performance across levels.
APPROACH

Organization Studied

The Navy Public Works Centers (PWCs), which provide engineering, maintenance (including rehabilitation construction), utilities, transportation, and housing to U.S. Navy customers within their geographic area, were chosen as the organization in which to conduct this study. There are five PWCs within the continental United States (CONUS)--Great Lakes, Norfolk, Pensacola, San Diego, and San Francisco (Oakland), and four others in the Pacific area--Guam, Pearl Harbor, HI; Subic Bay, PI; and Yokosuka, Japan. Their annual operating budget ranges from $60 million to $120 million; and the number of persons employed, from 675 to 3400.

The Naval Facilities Engineering Command (NAVFAC) is responsible for the operation of the PWCs. Thus, most of the policies governing the operations of each center are formulated by NAVFAC and are standardized. NAVFAC uses information and control systems so that PWC work activities can be centrally monitored and directed.

PWCs are almost identical as to tasks performed, available technology, organizational structure, and managerial background. To the extent that they service one large organization (i.e., the U.S. Navy shore establishment), the nature of their work and the means to accomplish it are consistent across sites. Structurally, each consists of four major hierarchical levels: (1) top management, consisting of officers from the Navy's Civil Engineering Corps, (2) middle management, consisting of civilian department heads, (3) several civilian supervisory levels, and (4) the civilian labor force. Except for the Center at Yokosuka, which has a number of Japanese department directors, top and middle managers are U.S. citizens, mostly Caucasian and male. The supervisory levels and the labor force, however, are made up of individuals from the community where the PWC is located. Thus, the similarities among organizations lie in their tasks, technology, organizational structure, and managerial background. Most of the differences are in the surrounding physical and social environments as well as in the ethnic and cultural composition of the labor force and supervisors.

Sample

Six of the nine PWCs were included in the study. Of these, three were located within CONUS--San Francisco, Great Lakes, and Norfolk; and three, in the Pacific area--Pearl Harbor, Yokosuka, and Subic Bay. The Commanding Officers of these PWCs encouraged all managers and supervisors to participate; these personnel, in turn, selected a sample of the work force representative of all PWC departments. The distribution of the final sample, which was drawn from all hierarchical levels of the organization, is shown in Table 1.

Survey Questionnaire

Two questionnaire forms were designed: one for the work force (Form A); and the other, for supervisory and managerial personnel (Form B) (see Appendices A and B). In many cases, questionnaire items were taken from scales previously used to measure the constructs of interest. Although the two forms were very similar, items that assessed attitudes toward supervision and control systems were included in Form A; and those that measured interdepartmental relations and various managerial practices, in Form B.
Table 1
Distribution of Study Participants by Hierarchical Level

<table>
<thead>
<tr>
<th>Location</th>
<th>Workers</th>
<th>Supervisors</th>
<th>Middle Managers (Civilian Department Heads)</th>
<th>Top Management (Military Officers)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Francisco</td>
<td>159</td>
<td>42</td>
<td>11</td>
<td>8</td>
<td>220</td>
</tr>
<tr>
<td>Great Lakes</td>
<td>166</td>
<td>34</td>
<td>6</td>
<td>10</td>
<td>216</td>
</tr>
<tr>
<td>Norfolk</td>
<td>199</td>
<td>127</td>
<td>10</td>
<td>4</td>
<td>340</td>
</tr>
<tr>
<td>Pearl Harbor</td>
<td>123</td>
<td>98</td>
<td>6</td>
<td>4</td>
<td>231</td>
</tr>
<tr>
<td>Yokosuka</td>
<td>74</td>
<td>74</td>
<td>10</td>
<td>4</td>
<td>162</td>
</tr>
<tr>
<td>Subic Bay</td>
<td>259</td>
<td>163</td>
<td>12</td>
<td>4</td>
<td>438</td>
</tr>
<tr>
<td>Total</td>
<td>980</td>
<td>538</td>
<td>55</td>
<td>34</td>
<td>1607</td>
</tr>
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Questionnaire items are described below:

1. **Demographics (D)** (Items 1-12, A-3 and 1-13, B-3). Items were intended to obtain demographic characteristics (e.g., age, ethnic identification, and tenure) of individual sample members.

2. **Role Stress (RS)** (Items 29-43, A-12/13 and B-10/11). Fifteen items were selected from the role stress scale developed by Rizzo et al. (1970). Seven of these items related to role conflict; and eight, to role ambiguity.

3. **Cultural Values (CV)** (Items 10-17, A-18 and B-16). To assess cultural values, 16 values were selected from Rokeach's Instrumental Value Survey (Rokeach, 1973). Respondents were asked to choose the four values they considered most important and the four they considered least important.

Since the items assessing any one construct are sometimes scattered within the questionnaire form rather than clustered in a specific part, the questionnaires provided in Appendices A and B are keyed to facilitate identification. For example, items pertaining to demographic characteristics are marked "D," while those pertaining to role stress are marked "RS." A complete key appears on the title page of each appendix. Unkeyed items do not pertain to constructs of interest in this report, and were not used in analyses.
4. **Job Values (JV)** (Items 14-19, A-11 and B-9). Respondents were presented with a list of nine specific job values (e.g., pay, security, recognition, and respect) and asked to choose the three they considered most important and the three they considered least important. Items were also included to assess feelings of responsibility toward the job.

5. **Organizational Climate (OC)** (See Footnote 1.). Items exploring climate dimensions were adapted from those developed by Campbell and Beaty (1971). These items assessed employees' perceptions of such organizational dimensions as climate, competence, flexibility, openness, status, and morale.

6. **General Job Characteristics (GJC)** (See Footnote 1). These items, which are similar to those included by Jenkins, Nadler, Lawler, and Cammann (1975) in their Nature of the Job Scale, assessed employees' perceptions of the characteristics of tasks performed as part of their jobs. Such characteristics included variety, skills, autonomy, cooperation, independence, task feedback, meaningfulness, and pace control.

7. **Specific Job Characteristics (SJC)** (See Footnote 1). These items were directed at characteristics particularly relevant to the PWC concerns, such as material handling, transportation, and equipment problems.

8. **Supervisory Influence (SI)** (Items 32-51, A-23/24; 53-72, B-24). Respondents were presented with a list of 10 supervisory duties (e.g., scheduling work, hiring or firing employees, and settling disagreements). Workers were asked to indicate how much influence they felt their supervisors did have and should have in specific areas; and supervisors, how much influence they felt they themselves had and should have in these areas.

9. **Perceptions of Supervisors (POS)** (Items 1-14, A-9/10; 52-53, A-24). Respondents to Form A (workers) were asked to indicate how well they felt their supervisors performed various supervisory duties.

10. **Managerial Practices (MP)** (See pages B-16/18, B-21; B-25/26.). Respondents to Form B (supervisors and managers) were asked to indicate how they felt managerial practices had affected such areas as: (a) flexibility (management's ability to adjust to the demands of the environment), (b) coordination (subsystems working together to facilitate goal attainment), (c) supervisory practices, (d) control system responsiveness (the ability to monitor attitudes and to provide feedback and rewards), and (e) communication processes (upward and downward).

11. **Job Satisfaction (JS)**. All respondents were asked to indicate how satisfied they were with various job aspects (e.g., pay, security, chances for getting ahead).

12. **Effectiveness (E)** (Items 17-21, A-16 and B-14). Respondents were asked to rate their center as to (a) overall performance, (b) productivity, (c) adaptability, (d) responsiveness, and (e) customer satisfaction.

**Procedure**

Questionnaires were administered to groups of approximately 5 to 25 workers or supervisory personnel (supervisors and managers) at the six PWC sites included in the study. Workers and supervisory personnel met separately to complete the questionnaires since (1) the two groups received different forms and (2) researchers felt that members of both groups would respond more candidly if they were not in the presence of persons from different levels. At the centers in Japan and the Philippines, questionnaires had been
translated into Japanese and the Tagalog dialect respectively. Also, at all sessions held at these centers, translators were present to explain the purpose of the study, to give instructions, and to answer questions.

**Analyses**

Responses to the items included to measure role stress were factor analyzed to determine whether the role stress being perceived by respondents could be categorized under role ambiguity and role conflict—the two composites of role stress conceptualized by Rizzo et al. (1970). Next, analyses of variance were performed to determine whether factor scores obtained on role stress composites were affected by center location and hierarchical level, and factor analyses were performed on responses to items assessing organizational climate (OC), general job characteristics (GJC), specific job characteristics (SJC), managerial practices (MP), supervisory influence (SI), and job satisfaction (JS) to reduce the variables to a reasonable number. Factor scores for the factors emerging from these analyses were then correlated with role ambiguity and role conflict factor scores. Finally, multiple regressions were performed to determine which factors were the best predictors of role ambiguity, role stress, intrinsic job satisfaction, and perceived work center performance.

**Hypotheses**

It was hypothesized that:

1. Perceived role stress would differ across cultural settings.

2. Perceived role stress would differ as a function of hierarchical level, and of the values of organization members.

3. Role stress would be related to organizational variables such as climate, managerial practices, supervisory characteristics, and job characteristics.

4. Role ambiguity and role conflict would be differentially related to job satisfaction and performance for employees from different hierarchical levels.

5. Role stress would be negatively related to job satisfaction and performance.
RESULTS

Role Stress Factor Scores

Results of the principal components factor analysis, using varimax rotation, performed on responses to the items included to measure role stress are provided in Table 2. As shown, two factors emerged—role ambiguity and role conflict—the two composites of role stress conceptualized by Rizzo et al. (1970).

For use in subsequent analyses, role conflict and role ambiguity factor scores were computed for each respondent. Mean factor scores across center location and hierarchical level are presented in Table 3.

To provide a clearer picture of the amount of role ambiguity and role conflict being experienced by respondents than could be obtained by observing the role stress factor scores, overall composite scores were obtained by summing the scores obtained by respondents on the items measuring each factor. Subjects responded to the role stress items using a 5-point scale, where 1 = To a very great extent, and 5 = Not at all. As can be seen in Table 2, the eight items loading on role ambiguity were worded so that the more positive the score, the more ambiguity perceived; and the seven items loading on role conflict, so that the more negative the score, the more conflict perceived. Thus, the role ambiguity scale score could range from 8, meaning "no ambiguity" to 40, meaning "maximum ambiguity"; and the role conflict scale score, from 7, meaning "maximum conflict," to 35, meaning "no conflict." The overall scores, which are shown in Table 4, indicate that moderate amounts of both role ambiguity and role conflict were reported at all levels. These scores were not used in subsequent analyses.

Effect of Center Location and Hierarchical Level on Role Stress Perceptions

To determine whether perceptions of role ambiguity and role conflict were affected by center location and hierarchical level, two-way analyses of variance (ANOVAs) were performed on respondents' role ambiguity and role conflict factor scores, using center location as one variable; and hierarchical level, as the other. Table 5, which summarizes the results of these ANOVAs, shows that significant effects were obtained for both location and level for both role ambiguity and role conflict, and that there was a significant interaction between location and level for role conflict.

An examination of Table 3 may shed some light on these findings. First, the means presented show that, for all centers except Great Lakes, workers perceived the greatest amount of role ambiguity, followed by managers and supervisors; and that, across levels, employees at PWC Japan reported less ambiguity than did those in the four U.S. centers. Duncan's range test was performed on this latter finding, and the difference was shown to be significant (W = .21, p < .05).

Further, Table 3 shows that supervisors and managers in the U.S. centers reported more role conflict than did the workers, while overseas workers reported more conflict than did supervisors and managers. A posterior t-tests confirmed these trends (t (1, 1589) = 6.16, p < .001; t (1,1589) = 1.97, p < .05 respectively). It was also demonstrated a posterior (Duncan's Range test) that workers at Subic Bay reported significantly more role conflict than did those at other centers (W = .24, p < .05).
Table 2

Summary of Factor Analysis of Role Stress Items

<table>
<thead>
<tr>
<th>Factor/Items</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td>I. Role Ambiguity</td>
<td></td>
</tr>
<tr>
<td>To what extent:</td>
<td></td>
</tr>
<tr>
<td>Do you know exactly what is expected of you?</td>
<td>.68</td>
</tr>
<tr>
<td>Do you know what your responsibilities are?</td>
<td>.62</td>
</tr>
<tr>
<td>Do you know that you have divided your time properly?</td>
<td>.58</td>
</tr>
<tr>
<td>Are explanations clear about what has to be done?</td>
<td>.57</td>
</tr>
<tr>
<td>Do you know if your work will be acceptable to your boss?</td>
<td>.54</td>
</tr>
<tr>
<td>Do you feel certain about how much authority you have?</td>
<td>.52</td>
</tr>
<tr>
<td>Do you feel certain about how you will be evaluated for a raise or promotion?</td>
<td>.47</td>
</tr>
<tr>
<td>Are you given enough time to do what is expected of you on your job?</td>
<td>.35</td>
</tr>
<tr>
<td>II. Role Conflict</td>
<td></td>
</tr>
<tr>
<td>To what extent:</td>
<td></td>
</tr>
<tr>
<td>Do you receive assignments without the manpower to complete them?</td>
<td>-.00</td>
</tr>
<tr>
<td>Do people ask you to do things on your job which get in the way of your work?</td>
<td>-.03</td>
</tr>
<tr>
<td>Do you have to break rules to get everything done on your job?</td>
<td>-.10</td>
</tr>
<tr>
<td>Do you work under conflicting policies and guidelines?</td>
<td>-.08</td>
</tr>
<tr>
<td>Do you do things that are likely to be accepted by one person and not accepted by others?</td>
<td>-.02</td>
</tr>
<tr>
<td>Does it seem like you have too much work for one person to do?</td>
<td>.11</td>
</tr>
<tr>
<td>Is it difficult to satisfy everybody at the same time?</td>
<td>-.00</td>
</tr>
</tbody>
</table>

aSee Appendices A and B, Items 29 through 43, pages A-12/13, and B-10/11.
Table 3
Role Stress Mean Factor Scores by Center Location and Hierarchical Level

<table>
<thead>
<tr>
<th>Center Location</th>
<th>Hierarchical Level</th>
<th>Workers</th>
<th>Supervisors</th>
<th>Managers&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Row Marginals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Role Ambiguity&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Francisco</td>
<td></td>
<td>.20</td>
<td>- .09</td>
<td>- .22</td>
<td>.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(159)</td>
<td>(42)</td>
<td>(19)</td>
<td>(220)</td>
</tr>
<tr>
<td>Great Lakes</td>
<td></td>
<td>.15</td>
<td>.20</td>
<td>- .29</td>
<td>.13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(166)</td>
<td>(34)</td>
<td>(16)</td>
<td>(216)</td>
</tr>
<tr>
<td>Norfolk</td>
<td></td>
<td>.00</td>
<td>- .33</td>
<td>- .58</td>
<td>.15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(199)</td>
<td>(127)</td>
<td>(14)</td>
<td>(340)</td>
</tr>
<tr>
<td>Pearl Harbor</td>
<td></td>
<td>.26</td>
<td>.07</td>
<td>- .18</td>
<td>.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(123)</td>
<td>(98)</td>
<td>(10)</td>
<td>(231)</td>
</tr>
<tr>
<td>Yokosuka</td>
<td></td>
<td>-.13</td>
<td>- .38</td>
<td>- .77</td>
<td>-.17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(74)</td>
<td>(74)</td>
<td>(14)</td>
<td>(162)</td>
</tr>
<tr>
<td>Subic Bay</td>
<td></td>
<td>.10</td>
<td>- .15</td>
<td>- .43</td>
<td>-.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(259)</td>
<td>(163)</td>
<td>(16)</td>
<td>(438)</td>
</tr>
<tr>
<td></td>
<td>Column Marginals</td>
<td>.13</td>
<td>- .15</td>
<td>- .40</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(980)</td>
<td>(538)</td>
<td>(89)</td>
<td>(1607)</td>
</tr>
<tr>
<td></td>
<td>Role Conflict&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Francisco</td>
<td></td>
<td>-.03</td>
<td>- .37</td>
<td>- .27</td>
<td>-.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(159)</td>
<td>(42)</td>
<td>(19)</td>
<td>(220)</td>
</tr>
<tr>
<td>Great Lakes</td>
<td></td>
<td>.19</td>
<td>- .37</td>
<td>-.04</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(166)</td>
<td>(34)</td>
<td>(16)</td>
<td>(216)</td>
</tr>
<tr>
<td>Norfolk</td>
<td></td>
<td>.30</td>
<td>.04</td>
<td>-.04</td>
<td>.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(199)</td>
<td>(127)</td>
<td>(14)</td>
<td>(340)</td>
</tr>
<tr>
<td>Pearl Harbor</td>
<td></td>
<td>.09</td>
<td>- .17</td>
<td>- .31</td>
<td>-.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(123)</td>
<td>(98)</td>
<td>(10)</td>
<td>(231)</td>
</tr>
<tr>
<td>Yokosuka</td>
<td></td>
<td>.22</td>
<td>.14</td>
<td>.40</td>
<td>.19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(74)</td>
<td>(74)</td>
<td>(14)</td>
<td>(162)</td>
</tr>
<tr>
<td>Subic Bay</td>
<td></td>
<td>-.27</td>
<td>- .02</td>
<td>-.07</td>
<td>-.17</td>
</tr>
<tr>
<td></td>
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<td>(259)</td>
<td>(163)</td>
<td>(16)</td>
<td>(438)</td>
</tr>
<tr>
<td></td>
<td>Column Marginals</td>
<td>.04</td>
<td>-.08</td>
<td>-.06</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(980)</td>
<td>(538)</td>
<td>(89)</td>
<td>(1607)</td>
</tr>
</tbody>
</table>

Note. Number of subjects in parentheses.

<sup>a</sup>Includes both military managers and department heads.

<sup>b</sup>The more positive the score, the more role ambiguity perceived.

<sup>c</sup>The more negative the score, the more role conflict perceived.
Table 4
Mean Scale Scores by Hierarchical Level

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Role Ambiguity Scale Score</th>
<th>Mean Role Conflict Scale Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers</td>
<td>20.18</td>
<td>22.26</td>
</tr>
<tr>
<td>Supervisors</td>
<td>18.83</td>
<td>21.84</td>
</tr>
<tr>
<td>Managers (Military and Civilian)</td>
<td>17.45</td>
<td>22.21</td>
</tr>
</tbody>
</table>

Note. Scores on the Role Ambiguity Scale could range from 8 (None) to 40 (Maximum); and those on the Role Conflict Scale, from 35 (None) to 7 (Maximum).
Table 5
Analysis of Variance Summary for Role Stress Factor Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Ambiguity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>9.6928</td>
<td>1</td>
<td>9.6928</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center Location</td>
<td>12.7864</td>
<td>5</td>
<td>2.5573</td>
<td>3.50</td>
<td>.001</td>
</tr>
<tr>
<td>Hierarchical Level</td>
<td>35.1573</td>
<td>2</td>
<td>17.5787</td>
<td>24.03</td>
<td>.000</td>
</tr>
<tr>
<td>Location x Level</td>
<td>6.7143</td>
<td>10</td>
<td>.6714</td>
<td>.92</td>
<td>.515</td>
</tr>
<tr>
<td>Error</td>
<td>1162.1992</td>
<td>1589</td>
<td>.7314</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1226.5500</td>
<td>1607</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role Conflict</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>.6036</td>
<td>1</td>
<td>.6036</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center Location</td>
<td>15.1776</td>
<td>5</td>
<td>3.0355</td>
<td>4.24</td>
<td>.001</td>
</tr>
<tr>
<td>Hierarchical Level</td>
<td>13.3927</td>
<td>2</td>
<td>6.6964</td>
<td>9.33</td>
<td>.000</td>
</tr>
<tr>
<td>Location x Level</td>
<td>27.5919</td>
<td>10</td>
<td>2.7592</td>
<td>3.84</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>1140.9648</td>
<td>1589</td>
<td>.7180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1197.7306</td>
<td>1607</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Relationship Between Role Stress and Various Organizational/Environmental Variables

Cultural and Work Values

To determine whether the significant main effects obtained for location on both role conflict and role ambiguity were related to cultural and job values, subjects' responses to items assessing these values were analyzed and given a numerical rating. The values selected as one of the four most important were assigned a 3; those selected as one of the four least important, a 1; and those not selected at all, a 2. Correlations between the ratings assigned the 25 values and the role ambiguity and role conflict factor scores were then run separately for workers and supervisors. No significant correlations emerged; in fact, only one correlation exceeded .20.

It was felt that these results might have resulted from grouping all center locations. Therefore, respondents were assigned to groups, which were analyzed separately: Those from the four U.S. PWCs served as one group; those from PWC Subic Bay, as a second; and those from PWC Yokosuka, as a third. This grouping was based on a hierarchical grouping analysis that indicated that the values of workers at U.S. centers were similar to each other, but different from those of workers at Subic Bay and Yokosuka (Reidel, Sheposh, & Young, 1979). Within these groupings, correlations between mean role ambiguity and role conflict scores and all 25 cultural and work value ratings were run separately for workers and supervisors. Again, no significant correlations emerged.

In a final attempt to determine whether role stress was related to cultural and job values, respondents having role ambiguity or role conflict factor scores greater than 1 were assigned to a high role ambiguity or role conflict group, and those with scores less than 1, to a low group. Cross-tabulations conducted to compare the responses of the two sets of high and low groups showed that there were no significant differences.

Organizational Climate and Job Characteristics

The results of the factor analyses performed on questionnaire items designed to measure organizational climate, specific job characteristics, and general job characteristics are provided in Table 6. As shown, five factors emerged for organizational climate; four, for specific job characteristics; and five, for general job characteristics. (Factors were included only if their eigenvalues exceeded .75.)

To determine whether these factors were related to role stress, respondents' scores on these factors were correlated with their factor scores on role ambiguity and role conflict. Results are presented in Table 7 and discussed below:

1. Organizational Climate. Table 7 shows that higher degrees of perceived role ambiguity are significantly associated with (a) negative perceptions of military management, (b) less work force/management agreement, (c) less openness/cooperative atmosphere within the organization, and (d) lower esprit de corps among organization members. Role conflict is also significantly related, but not to the same degree, to negative perceptions of military management and lower degrees of openness and esprit de corps. Thus, except for perceived problems, which correlated highly with role conflict, it appears that organizational climate is more strongly related to role ambiguity than to role conflict.

2. Specific Job Characteristics. Perceptions of role ambiguity were significantly related to materiel and manpower waste; and perceptions of role conflict, to all of the specific job characteristic factors.
### Table 6
Summary of Factor Analyses of Items on Organizational Variables

<table>
<thead>
<tr>
<th>Factor/Items</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td><strong>Organizational Climate</strong></td>
<td></td>
</tr>
<tr>
<td>Problems between people of different ethnic backgrounds</td>
<td>.78</td>
</tr>
<tr>
<td>Ethnic problems hurt center performance</td>
<td>.76</td>
</tr>
<tr>
<td>Employee theft presents a problem</td>
<td>.50</td>
</tr>
<tr>
<td><strong>Perceptions of Military Management</strong></td>
<td></td>
</tr>
<tr>
<td>Military management's ability to deal with personnel</td>
<td>- .04</td>
</tr>
<tr>
<td>Military management's financial management skills</td>
<td>.01</td>
</tr>
<tr>
<td>Opinion of civilians toward military</td>
<td>.03</td>
</tr>
<tr>
<td>Necessity of military management for successful operation</td>
<td>.11</td>
</tr>
<tr>
<td>Effect of military management on up-and-down communication</td>
<td>.14</td>
</tr>
<tr>
<td><strong>Work Force/Management Agreement</strong></td>
<td></td>
</tr>
<tr>
<td>Agreement on the way people are viewed</td>
<td>.00</td>
</tr>
<tr>
<td>Agreement on the way the world is viewed</td>
<td>.04</td>
</tr>
<tr>
<td>Agreement on individual value systems</td>
<td>- .01</td>
</tr>
<tr>
<td>Agreement on problems facing Public Works Centers</td>
<td>- .04</td>
</tr>
<tr>
<td>Agreement on supervisory practices</td>
<td>- .03</td>
</tr>
<tr>
<td><strong>Openess</strong></td>
<td></td>
</tr>
<tr>
<td>Supervisors willing to hear your problems</td>
<td>- .22</td>
</tr>
<tr>
<td>Workers confident in management's judgment</td>
<td>.04</td>
</tr>
<tr>
<td>Cooperation exists between departments</td>
<td>.02</td>
</tr>
<tr>
<td>Cooperative atmosphere among workers</td>
<td>.12</td>
</tr>
<tr>
<td>Rating of job security</td>
<td>- .03</td>
</tr>
<tr>
<td>Individual judgment trusted on work matters</td>
<td>.02</td>
</tr>
<tr>
<td>Effectiveness of center with unexpected problems</td>
<td>- .11</td>
</tr>
<tr>
<td><strong>Esprit de Corps</strong></td>
<td></td>
</tr>
<tr>
<td>Extent of esprit de corps</td>
<td>.03</td>
</tr>
<tr>
<td>Efficiency of Public Works Centers</td>
<td>.09</td>
</tr>
<tr>
<td>People go off if not watched</td>
<td>- .12</td>
</tr>
</tbody>
</table>

**Specific Job Characteristics**

<table>
<thead>
<tr>
<th>I. Material Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damaged material contributes to waste</td>
</tr>
<tr>
<td>Wrong material delivered contribut es to waste</td>
</tr>
<tr>
<td>Theft contributes to waste</td>
</tr>
<tr>
<td>Procedures for turning in material cause waste</td>
</tr>
<tr>
<td>Stockpiling of material occurs</td>
</tr>
<tr>
<td>Material wasted at this Public Works Center</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers get the supplies they need</td>
</tr>
<tr>
<td>Workers are successful at getting material</td>
</tr>
<tr>
<td>The Material Department gets the material to the job site</td>
</tr>
<tr>
<td>Equipment is safe</td>
</tr>
<tr>
<td>Vehicles are designed to do the job</td>
</tr>
<tr>
<td>Transportation is safe</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. Manpower Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are more workers than are needed on the job</td>
</tr>
<tr>
<td>There are times without enough work to keep busy</td>
</tr>
<tr>
<td>Time spent in nonproductive activity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV. Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of vehicle breakdown</td>
</tr>
<tr>
<td>How much better vehicles would increase production</td>
</tr>
<tr>
<td>Safety of transportation</td>
</tr>
</tbody>
</table>

15
<table>
<thead>
<tr>
<th>Factor/Items</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Job Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Pay and Fringe Benefits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pay is fair considering others in industry</td>
<td>.68</td>
<td>-.09</td>
<td>.00</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Pay is fair considering others in the organization</td>
<td>.23</td>
<td>.03</td>
<td>.03</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>II. Job Challenge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job gives an opportunity for independence</td>
<td>.01</td>
<td>.37</td>
<td>.00</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Job is significant and important</td>
<td>-.01</td>
<td>.34</td>
<td>.04</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>III. Reward Contingencies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood that one doing a bad job will be reprimanded</td>
<td>-.03</td>
<td>-.07</td>
<td>.52</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Likelihood that one doing a good job will be rewarded</td>
<td>.00</td>
<td>.05</td>
<td>.34</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>IV. Job Importance (Workers Only)</td>
<td></td>
<td></td>
<td></td>
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<td>Job requires high level skills</td>
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<td>Job requires you to handle surprising situations</td>
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<td>.09</td>
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<td>Job is crucial for many others' work</td>
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<td>N/A</td>
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<td>V. Time Constraints (Workers Only)</td>
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<tr>
<td>Frequently asked to do excessive amounts of work</td>
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<td>Frequently interrupted for reasons unrelated to work</td>
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<td>N/A</td>
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Table 7
Correlations of Role Ambiguity and Role Conflict Factor Scores
With Organizational Climate and Job Characteristics Factors

<table>
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<tr>
<th>Factor</th>
<th>Role Ambiguity</th>
<th>Role Conflict</th>
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<tr>
<td><strong>Organizational Climate</strong></td>
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<td></td>
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<tr>
<td>Perceptions of military management</td>
<td>.24**</td>
<td>-.07*</td>
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<td>Work force/management agreement</td>
<td>.20**</td>
<td>-.06</td>
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<td>Openness</td>
<td>.42**</td>
<td>-.17**</td>
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<td>Esprit de Corps</td>
<td>.21**</td>
<td>-.18**</td>
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<td>Problems</td>
<td>.02</td>
<td>.30**</td>
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<td><strong>Specific Job Characteristics</strong></td>
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<td>Material waste</td>
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<td>.30**</td>
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<td>Materiel</td>
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<td>Manpower waste</td>
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<td>Vehicles</td>
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<td><strong>General Job Characteristics</strong></td>
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<td>Pay and fringe benefits</td>
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<td>Job challenge</td>
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<td>Job importance (workers only)</td>
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<tr>
<td>Time constraints (workers only)</td>
<td>.07</td>
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</table>

*p < .01.

**p < .001.

3. General Job Characteristics. Higher degrees of perceived role ambiguity and role conflict were significantly associated with feelings that the job was not challenging and that reward contingencies were inappropriate. Also, role conflict was associated with feelings that the pay was unfair compared to that of others.

As shown in Table 6, two general job characteristic factors—those concerning job importance and time constraints—were extracted from items to which only the work force responded. Perceptions of role ambiguity correlated significantly with feelings that the job was unimportant, while role conflict correlated with pressures related to time constraints.

Supervisory Influence

As indicated previously, items assessing supervisory influence asked workers to indicate how much say they felt their supervisors had and should have in 10 specific areas; and supervisors/managers, how much they felt they themselves had and should have in those areas. Responses were made on a 5-point scale, where 1 = A great deal and 5 = Nothing. Scores for these items were the differences or discrepancies between respondents' perceptions of what the supervisors' influence was and should be in each area. As shown in Table 8, they could range from -4 to +4.
Table 8

Frequencies of Discrepancy Scores by Hierarchical Level

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<td>How much say (does/do) (your supervisor/you) have and how much say should (he/you) have in making decisions about:</td>
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<tr>
<td>• How you do your work</td>
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</tr>
<tr>
<td>• Settling disagreements</td>
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<td>63</td>
<td>15</td>
<td>1</td>
<td>1</td>
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</tr>
</tbody>
</table>

Notes.

1. A more positive score indicates supervisors have less say than they should.

2. Since some respondents did not answer all questions, the totals in this table for employees at each hierarchical level may be less than the actual total.
To determine whether respondents' perceptions of supervisory influence were related to role ambiguity and role conflict, discrepancy scores were correlated with mean role ambiguity and role conflict scores. Results are provided in Table 9, which shows that, for workers, discrepancies in authority in handling problems and settling disagreements correlated significantly with both role ambiguity and role conflict; and those in authority in responding to unexpected events, with role conflict only.

For supervisors, discrepancies in authority in doing work, scheduling work, handling problems, firing people, and promoting people correlated significantly with both role ambiguity and role conflict. Discrepancies in authority in hiring people correlated significantly with role ambiguity only; and those in authority in granting pay raises, with role conflict only.

For managers, discrepancies in authority regarding hiring and promoting people correlated significantly with role ambiguity. Discrepancies in authority in doing work, scheduling work, and handling problems correlated significantly with role conflict. For further analyses, the questionnaire data obtained on items measuring supervisory influence were factor analyzed. The items comprising each factor and their factor loadings are presented in Table 10.

Workers' Perceptions of Supervision

Results of the factor analyses performed on items designed to assess workers' perceptions of supervisors are provided in Table 11. To determine whether these factors were related to role stress, respondents' factor scores were correlated with their role ambiguity and role conflict factor scores. Results showed that workers who reported high levels of role ambiguity felt that their supervisors were incompetent or unsupportive, and that those who reported high levels of role conflict felt that their supervisors were biased. The correlation between supervisory competence and role ambiguity was .32; that between supervisory support and role ambiguity, .29; and that between supervisory bias and role conflict, .33. All of these correlations were significant at the .01 level.

Supervisory Personnel's Perceptions of Managerial Practices

Results of the factor analysis of items included to assess supervisors' perceptions of managerial practices are provided in Table 12; and correlations between respondents' factor scores and role ambiguity and role conflict factor scores, in Table 13. As shown, more role ambiguity and role conflict were perceived by supervisors when they felt that the flow of communication was hampered, workers were being derogated, performance standards were not well established, and supervision was being bypassed.

Results of Multiple Regression Analyses

Predictors of Role Ambiguity and Role Conflict

To examine the relative influence of organizational climate (OC), specific job characteristics (SJC), general job characteristics (GJC), and supervisory influence (SI) factors (see Tables 6 and 10) on role stress, multiple regression analyses were performed to determine which factors were most predictive of role ambiguity and role conflict. Results are provided in Table 14, which shows that perceptions of job challenge are the best predictor of role ambiguity for workers, followed by materiel, openness, and perceptions of military managers. For supervisors, openness is the best predictor of role ambiguity, followed by perceptions of military management, work force/management agreement, and job challenge.
Table 9
Correlations of Role Conflict and Role Ambiguity Factor Scores with Supervisory Influence Discrepancy Scores

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<th>Level/Item</th>
<th>Role Ambiguity</th>
<th>Role Conflict</th>
</tr>
</thead>
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<tr>
<td><strong>Workers</strong></td>
<td></td>
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</tr>
<tr>
<td>How much say (does/should) your supervisor have in making decisions about:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How you do your work</td>
<td>.02</td>
<td>-.01</td>
</tr>
<tr>
<td>Scheduling work</td>
<td>.06</td>
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<td>Handling problems</td>
<td>.08*</td>
<td>-.10**</td>
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<td>Hiring people</td>
<td>.01</td>
<td>-.01</td>
</tr>
<tr>
<td>Pay raises</td>
<td>.05</td>
<td>-.01</td>
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<td>When people take time off</td>
<td>.03</td>
<td>-.06</td>
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<td>What to do when something unexpected happens</td>
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<td>.10*</td>
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<td><strong>Supervisors</strong></td>
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<tr>
<td>How much say (do/should) you have in making decisions about:</td>
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<tr>
<td>How you do your work</td>
<td>.14*</td>
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<tr>
<td>What to do when something unexpected happens</td>
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<td>Settling disagreements</td>
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<tr>
<td><strong>Managers</strong></td>
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<tr>
<td>How much say (do/should) you have in making decisions about:</td>
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<tr>
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<td>Settling disagreements</td>
<td>.30</td>
<td>-.19</td>
</tr>
</tbody>
</table>

Note. Number of respondents ranged from 773 to 857 for workers; from 449 to 481 for supervisors; and from 52 to 55 for managers.


*p < .01.

**p < .001.
Table 10
Summary of Factor Analyses of Supervisory Influence Items

<table>
<thead>
<tr>
<th>Factor/Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td>I. Supervisory Influence in Task Matters</td>
<td></td>
</tr>
<tr>
<td>Supervisor's say in:</td>
<td></td>
</tr>
<tr>
<td>Handling problems you face</td>
<td>.83</td>
</tr>
<tr>
<td>How you do your work</td>
<td>.77</td>
</tr>
<tr>
<td>Scheduling your work</td>
<td>.72</td>
</tr>
<tr>
<td>What you do in an emergency</td>
<td>.66</td>
</tr>
<tr>
<td>Settling disagreements</td>
<td>.59</td>
</tr>
<tr>
<td>II. Supervisory Influence in Personnel Matters</td>
<td></td>
</tr>
<tr>
<td>Supervisors say in:</td>
<td></td>
</tr>
<tr>
<td>Promoting people</td>
<td>.22</td>
</tr>
<tr>
<td>Firing people</td>
<td>.15</td>
</tr>
<tr>
<td>Hiring people</td>
<td>.24</td>
</tr>
<tr>
<td>Pay raises</td>
<td>.10</td>
</tr>
</tbody>
</table>

Table 11
Summary of Factor Analyses of Items on Workers' Perceptions of Supervisors

<table>
<thead>
<tr>
<th>Factor/Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td>I. Supervisory Competence</td>
<td></td>
</tr>
<tr>
<td>Supervisor knows the administrative parts of his job</td>
<td>.72</td>
</tr>
<tr>
<td>Supervisor knows the technical parts of his job</td>
<td>.69</td>
</tr>
<tr>
<td>Supervisor helps you solve work-related problems</td>
<td>.65</td>
</tr>
<tr>
<td>Supervisor is competent</td>
<td>.64</td>
</tr>
<tr>
<td>Supervisor helps you develop your skills</td>
<td>.63</td>
</tr>
<tr>
<td>Supervisor knows about on-the-job performance</td>
<td>.58</td>
</tr>
<tr>
<td>Supervisor sees you know what has to be done</td>
<td>.57</td>
</tr>
<tr>
<td>Supervisor does a good job judging your performance</td>
<td>.57</td>
</tr>
<tr>
<td>Supervisor demands high-quality work</td>
<td>.49</td>
</tr>
<tr>
<td>Supervisor checks to see how you are doing</td>
<td>.46</td>
</tr>
<tr>
<td>II. Supervisory Support</td>
<td></td>
</tr>
<tr>
<td>Supervisor praises good work</td>
<td>.49</td>
</tr>
<tr>
<td>Supervisor supports you</td>
<td>.46</td>
</tr>
<tr>
<td>Supervisor encourages you to participate in decisions</td>
<td>.35</td>
</tr>
<tr>
<td>III. Supervisory Bias</td>
<td></td>
</tr>
<tr>
<td>Supervisor shows favoritism</td>
<td>-.21</td>
</tr>
<tr>
<td>Supervisor is biased on the basis of race</td>
<td>-.02</td>
</tr>
</tbody>
</table>

\( ^{a} \)Items 1-13, A-9; 52-53, A-24.
Table 12
Summary of Factor Analyses of Managerial Practice Items

<table>
<thead>
<tr>
<th>Factor/Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td>I. Flow of Communication</td>
<td></td>
</tr>
<tr>
<td>Suggestions made to top management receive fair evaluation</td>
<td>.69</td>
</tr>
<tr>
<td>Management is interested in ideas from below</td>
<td>.69</td>
</tr>
<tr>
<td>Communication flows up and down</td>
<td>.66</td>
</tr>
<tr>
<td>Management sets up work to flow smoothly</td>
<td>.56</td>
</tr>
<tr>
<td>Supervisors are rewarded for helping subordinates with skills</td>
<td>.52</td>
</tr>
<tr>
<td>Those in authority make prompt decisions to problems</td>
<td>.52</td>
</tr>
<tr>
<td>Good ideas don't go up because management is not approachable</td>
<td>.52</td>
</tr>
<tr>
<td>You are encouraged to participate in decisions that affect you</td>
<td>.48</td>
</tr>
<tr>
<td>(Items 1, 5-7, B-16; 8, 11-12, 16-17, B-17; 20, B-18)</td>
<td></td>
</tr>
<tr>
<td>II. Production Management System (PMS)</td>
<td></td>
</tr>
<tr>
<td>PMS has improved coordination of Public Works Center functions</td>
<td>.15</td>
</tr>
<tr>
<td>PMS has improved scheduling of work</td>
<td>.16</td>
</tr>
<tr>
<td>PMS has improved planning of work</td>
<td>.15</td>
</tr>
<tr>
<td>PMS has improved efficiency of work accomplishment</td>
<td>.15</td>
</tr>
<tr>
<td>(Items 28-31, B-21)</td>
<td></td>
</tr>
<tr>
<td>III. Derogation of Workers</td>
<td></td>
</tr>
<tr>
<td>Information is withheld from workers</td>
<td>-.23</td>
</tr>
<tr>
<td>Workers are blamed when things go wrong</td>
<td>-.17</td>
</tr>
<tr>
<td>Threats and punishments are used to get people to work</td>
<td>-.05</td>
</tr>
<tr>
<td>Small matters referred to higher-ups</td>
<td>-.09</td>
</tr>
<tr>
<td>(Items 3, 4, B-16; 75, B-25, 87, B-26)</td>
<td></td>
</tr>
<tr>
<td>IV. Reporting System</td>
<td></td>
</tr>
<tr>
<td>Necessary information is provided for reporting systems to operate</td>
<td>.14</td>
</tr>
<tr>
<td>Reporting systems accurately reflect what is taking place on the job</td>
<td>.27</td>
</tr>
<tr>
<td>The effect of PMS upon the amount of work</td>
<td>-.03</td>
</tr>
<tr>
<td>Pressure is applied to avoid the use of overhead</td>
<td>-.11</td>
</tr>
<tr>
<td>(Items 28-31, B-21)</td>
<td></td>
</tr>
<tr>
<td>V. Performance Standards</td>
<td></td>
</tr>
<tr>
<td>Standards of performance are established in writing</td>
<td>.13</td>
</tr>
<tr>
<td>Performance appraisals are based on written standards</td>
<td>.09</td>
</tr>
<tr>
<td>Performance standards are established for your job</td>
<td>.13</td>
</tr>
<tr>
<td>(Items 18-19, B-17; 73, B-25)</td>
<td></td>
</tr>
<tr>
<td>VI. Proper Channels Followed</td>
<td></td>
</tr>
<tr>
<td>Chain of command is followed in decision-making</td>
<td>.37</td>
</tr>
<tr>
<td>Going through the proper channels is required</td>
<td>.22</td>
</tr>
<tr>
<td>(Items 84, 86, B-26)</td>
<td></td>
</tr>
<tr>
<td>VII. Supervision Bypassed</td>
<td></td>
</tr>
<tr>
<td>Workers are given orders by those other than their immediate supervisor</td>
<td>-.08</td>
</tr>
<tr>
<td>Management bypasses levels below them in assigning work</td>
<td>-.36</td>
</tr>
<tr>
<td>(Items 9-10, B-17)</td>
<td></td>
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Table 13
Correlations of Role Ambiguity and Role Conflict Factor Scores with Managerial Practice Factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>Role Ambiguity</th>
<th>Role Conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow of communication</td>
<td>.45**</td>
<td>-.26**</td>
</tr>
<tr>
<td>PMS</td>
<td>.08</td>
<td>-.03</td>
</tr>
<tr>
<td>Derogation of workers</td>
<td>-.17**</td>
<td>.32**</td>
</tr>
<tr>
<td>Reporting system</td>
<td>.07</td>
<td>.00</td>
</tr>
<tr>
<td>Performance standards</td>
<td>.10*</td>
<td>-.14</td>
</tr>
<tr>
<td>Proper channels followed</td>
<td>.06</td>
<td>-.02</td>
</tr>
<tr>
<td>Supervision bypassed</td>
<td>.18**</td>
<td>-.17**</td>
</tr>
</tbody>
</table>

*p < .01.
**p < .001.
Table 14
Simple and Multiple Correlations of Role Stress Factor Scores by Level

<table>
<thead>
<tr>
<th>Factor</th>
<th>β</th>
<th>Simple&lt;sup&gt;a&lt;/sup&gt; r</th>
<th>Multiple R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Ambiguity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workers (N = 980)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job challenge (GJC)</td>
<td>0.27</td>
<td>0.38</td>
<td>0.38</td>
</tr>
<tr>
<td>Materiel (SJC)</td>
<td>0.06</td>
<td>0.31</td>
<td>0.45</td>
</tr>
<tr>
<td>Openness (OC)</td>
<td>0.18</td>
<td>0.35</td>
<td>0.48</td>
</tr>
<tr>
<td>Perceptions of military management (OC)</td>
<td>0.17</td>
<td>0.21</td>
<td>0.51</td>
</tr>
<tr>
<td>Work force/management agreement (OC)</td>
<td>0.12</td>
<td>0.20</td>
<td>0.53</td>
</tr>
<tr>
<td>Esprit de corps (OC)</td>
<td>0.05</td>
<td>0.22</td>
<td>0.53</td>
</tr>
<tr>
<td>Manpower waste (SJC)</td>
<td>-0.07</td>
<td>-0.18</td>
<td>0.54</td>
</tr>
<tr>
<td>(r² = .29)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisors (N = 596)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Openness (OC)</td>
<td>0.25</td>
<td>0.45</td>
<td>0.45</td>
</tr>
<tr>
<td>Perceptions of military management (OC)</td>
<td>0.15</td>
<td>0.29</td>
<td>0.52</td>
</tr>
<tr>
<td>Work force/management agreement (OC)</td>
<td>0.15</td>
<td>0.21</td>
<td>0.56</td>
</tr>
<tr>
<td>Job challenge (GJC)</td>
<td>0.17</td>
<td>0.43</td>
<td>0.58</td>
</tr>
<tr>
<td>Reward contingencies (GJC)</td>
<td>0.10</td>
<td>0.32</td>
<td>0.60</td>
</tr>
<tr>
<td>Supervisory influence in task matters (SI)</td>
<td>0.16</td>
<td>0.35</td>
<td>0.62</td>
</tr>
<tr>
<td>Esprit de corps (OC)</td>
<td>0.08</td>
<td>0.24</td>
<td>0.62</td>
</tr>
<tr>
<td>(r² = .39)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role Conflict</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workers (N = 980)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problems (OC)</td>
<td>0.24</td>
<td>0.36</td>
<td>0.36</td>
</tr>
<tr>
<td>Openness (OC)</td>
<td>-0.14</td>
<td>-0.25</td>
<td>0.44</td>
</tr>
<tr>
<td>Material waste (SJC)</td>
<td>0.23</td>
<td>0.34</td>
<td>0.49</td>
</tr>
<tr>
<td>Vehicles (SJC)</td>
<td>0.16</td>
<td>0.23</td>
<td>0.52</td>
</tr>
<tr>
<td>Materiel (SJC)</td>
<td>-0.14</td>
<td>-0.19</td>
<td>0.53</td>
</tr>
<tr>
<td>Pay and fringe benefits (GJC)</td>
<td>-0.10</td>
<td>-0.17</td>
<td>0.54</td>
</tr>
<tr>
<td>Manpower waste (SJC)</td>
<td>0.11</td>
<td>0.20</td>
<td>0.54</td>
</tr>
<tr>
<td>(r² = .30)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisors (N = 596)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Esprit de corps (OC)</td>
<td>-0.15</td>
<td>-0.27</td>
<td>0.27</td>
</tr>
<tr>
<td>Material waste (SJC)</td>
<td>0.15</td>
<td>0.23</td>
<td>0.33</td>
</tr>
<tr>
<td>Perceptions of military management (OC)</td>
<td>-0.12</td>
<td>-0.21</td>
<td>0.38</td>
</tr>
<tr>
<td>Work force/management agreement (OC)</td>
<td>-0.12</td>
<td>-0.19</td>
<td>0.41</td>
</tr>
<tr>
<td>Manpower waste (SJC)</td>
<td>0.14</td>
<td>0.26</td>
<td>0.43</td>
</tr>
<tr>
<td>Vehicles</td>
<td>0.11</td>
<td>0.18</td>
<td>0.46</td>
</tr>
<tr>
<td>Supervisory influence in task matters (SI)</td>
<td>-0.10</td>
<td>-0.14</td>
<td>0.47</td>
</tr>
<tr>
<td>(r² = .22)</td>
<td></td>
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</tbody>
</table>

<sup>a</sup>All simple correlations are significant at p < .01.
Organizational problems and openness were most predictive of role conflict for workers; and esprit de corps and material waste, for supervisors.

Predictors of Satisfaction and Work Center Performance

Respondents were asked to rate their work center's performance (Item 17, A-16 and B-14) and to indicate how satisfied they were with various aspects of the job (Items 20-28, A-11/12 and B-9/10). From factor analyses performed on responses to the satisfaction items, two factors emerged—intrinsic and extrinsic satisfaction (Table 19). Multiple regression analyses were then performed. Intrinsic satisfaction factor scores or the work center performance score were used as the criterion of organizational effectiveness; and the factors that emerged from factor analyses performed on items measuring role stress (RS), organizational climate (OC), specific job characteristics (SJC), general job characteristics (GJC), and supervisory influence (SI) as the independent variables (see Tables 2, 6, and 10).

As can be seen from Table 16, the sets of factors predicting intrinsic satisfaction were very similar for workers and supervisors. For both workers and supervisors, the two best predictors were esprit de corps (OC) and role ambiguity (RS). Both sets of factors produced a multiple correlation of .61, accounting for 37 percent of the variance.

When work center performance was used as the criterion, however, a different pattern of predictors emerged. For both workers and supervisors, openness (OC) was the best predictor of performance. Other factors included in both sets were perceptions of problems, manpower waste, and supervisory influence in task matters. Interestingly, however, perceptions of role ambiguity and role conflict were predictive of perceived work center performance for workers but not for supervisors; and esprit de corps, for supervisory personnel but not for workers. The multiple correlations for the sets of predictors for supervisors and for workers were .54 and .57 respectively accounting for 29 and 32 percent of the variance. In general, the predictors of center performance seem to be task-related, and the predictors of satisfaction, individual-related.
Table 15
Summary of Factor Analyses Performed on Satisfaction Items

<table>
<thead>
<tr>
<th>Factor/Itema</th>
<th>Loading</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Factor I</td>
<td>Factor II</td>
<td></td>
</tr>
<tr>
<td>I. Intrinsic Satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With chances to accomplish something</td>
<td>-.74</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>With the opportunity to develop skills</td>
<td>-.63</td>
<td>.37</td>
<td></td>
</tr>
<tr>
<td>With recognition received</td>
<td>-.62</td>
<td>.30</td>
<td></td>
</tr>
<tr>
<td>With seeing results of your work</td>
<td>-.53</td>
<td>.06</td>
<td></td>
</tr>
<tr>
<td>With chances for getting ahead</td>
<td>-.49</td>
<td>.49</td>
<td></td>
</tr>
<tr>
<td>With respect received from co-workers</td>
<td>-.42</td>
<td>.24</td>
<td></td>
</tr>
<tr>
<td>II. Extrinsic Satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With pay</td>
<td>.07</td>
<td>.54</td>
<td></td>
</tr>
<tr>
<td>With chances for getting ahead</td>
<td>.49</td>
<td>.49</td>
<td></td>
</tr>
<tr>
<td>With job security you have</td>
<td>.24</td>
<td>.52</td>
<td></td>
</tr>
</tbody>
</table>

Table 16
Simple and Multiple Correlations of Factors with Intrinsic Satisfaction and Work Center Performance by Level

<table>
<thead>
<tr>
<th>Factor</th>
<th>( \beta )</th>
<th>Simple ( r )</th>
<th>Multiple ( R )</th>
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<tbody>
<tr>
<td><strong>Intrinsic Satisfaction</strong></td>
<td></td>
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<tr>
<td><strong>Workers (N = 980)</strong></td>
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</tr>
<tr>
<td>Esprit de corps (OC)</td>
<td>.27</td>
<td>.40</td>
<td>.40</td>
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<tr>
<td>Role ambiguity (RS)</td>
<td>.10</td>
<td>.37</td>
<td>.50</td>
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<tr>
<td>Reward contingencies (GJC)</td>
<td>.11</td>
<td>.38</td>
<td>.53</td>
</tr>
<tr>
<td>Job challenge (GJC)</td>
<td>.17</td>
<td>.30</td>
<td>.56</td>
</tr>
<tr>
<td>Perceptions of military management (OC)</td>
<td>.20</td>
<td>.25</td>
<td>.58</td>
</tr>
<tr>
<td>Work force/management agreement (OC)</td>
<td>.17</td>
<td>.26</td>
<td>.60</td>
</tr>
<tr>
<td>Openness (OC)</td>
<td>.13</td>
<td>.31</td>
<td>.61</td>
</tr>
<tr>
<td>((r^2 = .37))</td>
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<tr>
<td><strong>Supervisors (N = 596)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role ambiguity (RS)</td>
<td>.25</td>
<td>.50</td>
<td>.50</td>
</tr>
<tr>
<td>Esprit de corps (OC)</td>
<td>.20</td>
<td>.34</td>
<td>.55</td>
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<tr>
<td>Perceptions of military management (OC)</td>
<td>.17</td>
<td>.31</td>
<td>.58</td>
</tr>
<tr>
<td>Job challenge (GJC)</td>
<td>.08</td>
<td>.35</td>
<td>.59</td>
</tr>
<tr>
<td>Work force/management agreement (OC)</td>
<td>.12</td>
<td>.21</td>
<td>.60</td>
</tr>
<tr>
<td>Openness (OC)</td>
<td>.11</td>
<td>.34</td>
<td>.61</td>
</tr>
<tr>
<td>((r^2 = .37))</td>
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<tr>
<td><strong>Work Center Performance</strong></td>
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<td><strong>Workers (N = 980)</strong></td>
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<td></td>
</tr>
<tr>
<td>Openness (OC)</td>
<td>.21</td>
<td>.41</td>
<td>.41</td>
</tr>
<tr>
<td>Role ambiguity (RS)</td>
<td>.22</td>
<td>.38</td>
<td>.48</td>
</tr>
<tr>
<td>Role conflict (RS)</td>
<td>-.08</td>
<td>-.26</td>
<td>.52</td>
</tr>
<tr>
<td>Manpower waste (SJC)</td>
<td>-.09</td>
<td>-.25</td>
<td>.53</td>
</tr>
<tr>
<td>Supervisory influence in task matters (SI)</td>
<td>.13</td>
<td>.26</td>
<td>.55</td>
</tr>
<tr>
<td>Problems</td>
<td>-.11</td>
<td>-.17</td>
<td>.56</td>
</tr>
<tr>
<td>((r^2 = .32))</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Supervisors (N = 596)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Openness (OC)</td>
<td>.36</td>
<td>.43</td>
<td>.43</td>
</tr>
<tr>
<td>Manpower waste (SJC)</td>
<td>-.10</td>
<td>-.24</td>
<td>.48</td>
</tr>
<tr>
<td>Problems (OC)</td>
<td>-.13</td>
<td>-.21</td>
<td>.51</td>
</tr>
<tr>
<td>Supervisory influence in task matters (SI)</td>
<td>.13</td>
<td>.28</td>
<td>.52</td>
</tr>
<tr>
<td>Esprit de corps (OC)</td>
<td>.14</td>
<td>.27</td>
<td>.54</td>
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<tr>
<td>((r^2 = .29))</td>
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\(a\) All simple correlations are significant at \( p < .01 \).
DISCUSSION AND CONCLUSIONS

Effects of Center Location and Hierarchical Level on Role Stress Perceptions

The results indicate that role conflict and role ambiguity are prevalent among Public Works Center (PWC) employees and that they are related to lower employee satisfaction and perceptions of decreased performance, as well as to organizational and environmental variables. In contrast to previous findings indicating that those in supervisory positions perceive the most role ambiguity (e.g., Sims & Szilagyi, 1975; Wispe & Thayer, 1957), findings of this study showed that workers perceived the greatest amount. This may be due, in part, to the nature of the tasks PWC workers must perform. A considerable portion of PWC work relates to rehabilitation construction, which means that workers must frequently change jobs, and are constantly being exposed to different customers with different expectations. Frequent job changes require flexibility within the worker's task area and interdepartmental coordination with other occupational specialties. Ideally, supervisors would serve as on-the-job coordinators and problem-solvers. In actuality, however, they spend very little time on each job. Both the number of jobs and the paperwork a supervisor is required to handle prohibit close on-the-job supervision. Thus, workers must deal with ambiguity stemming from frequent job changes and coordination requirements without much direct assistance from their supervisors.

It may be that the role ambiguity being perceived by workers is related to the nature of the organization itself. PWCs are government-run, bureaucratic, formalized organizations. Thus, managers and--to a lesser extent--supervisors must respond to a control system that requires many routine paperwork tasks, and reduces the potential sources of role ambiguity. Since the majority of the job changes occur on the job site, managers are quite removed from this source of ambiguity. Supervisors must respond at least indirectly to on-the-job changes. Thus, as would be expected, they perceived a moderate amount of ambiguity.

In the U.S. PWCs, managers perceive more role conflict than do workers. It may be that they are more sensitive to the role conflict dimension because it partially represents perceived time pressures. If a job is not completed on time, perhaps because the material did not arrive on time or because there wasn't enough manpower to do the job, workers can blame poor supervisory planning or scheduling. Managers, however, must respond to pressures to do the job in the most cost-effective manner possible, while providing supervisors with sufficient, but not wasteful, guidelines with which to schedule jobs. Supervisors feel conflicts over time because they must be sympathetic to workers' problems in completing the job while meeting deadlines. The conflict expressed by civilian managers could be due to differences in tenure of military and civilian managers. Military managers, who occupy the top positions in the organization, are regularly reassigned to other commands, while civilian managers usually occupy one position for a long period of time. Thus, civilian managers may experience role conflict in responding to changing policies and directives initiated by new military managers.

An examination of role stress across the center locations shows that employees at the PWC in Japan perceive significantly less role ambiguity than those at the four U.S. PWCs. This may indicate that lower degrees of role stress are operating at the center, or it may reflect a tendency for employees in Japan to have positive, accepting attitudes toward their job.

At Subic Bay, workers perceived significantly more role conflict than workers at the other centers. This may be due to characteristics of the Filipino work force and the inequities they perceive in relation to the American employees at supervisory and
managerial levels. Filipino employees are paid in accordance with the Filipino standard of living; and Americans, with the much higher American standard of living. Because most of the supervisory and all of the managerial personnel are American, Filipino workers are required to respond to American supervision, which they may resent due to cultural differences and salary inequities. At the PWC in Japan, the top management personnel are U.S. citizens but all military mid-level managers are Japanese. Further, managers' and workers' salary schedules are based on the same standards. Consequently, the Japanese workers are not faced with a supervisory force of different ethnicity and salary schedules, which may explain why they do not feel as much role conflict as do workers in Subic Bay.

Relationship Between Role Stress and Organizational/Environmental Variables

Cultural and Work Values

Although there appeared to be some differences in perceptions of role stress across cultural settings, no relationship was found between these differences and respondents' cultural values. It may be that the personality-related values measured are in fact not related to role stress on the job, or it may be still another example of the difficulty encountered in measuring personality-related values (see Reidel, et al. 1979). The importance an individual places on certain values may be too intangible to measure with rankings. It is somewhat surprising, however, that no relationship was found between job values (e.g., pay, security) and role stress. Again, this may be a measurement problem, or it may be that there is no relationship between role stress and job values.

Organizational Climate and Job Characteristics

From correlations between role stress components and organizational/job characteristics factors, it appears that perceptions of role ambiguity are more strongly correlated with organizational climate and general job characteristics; and perceptions of role conflict, with specific job characteristics. This is probably due, in part, to the fact that role conflict is partially a measure of day-to-day conflicting time pressures. For example, inadequate manpower and materials could prohibit members from meeting expectations on time. Role ambiguity seems to be less involved with day-to-day job activities and more involved with generalized considerations about one's role within the organization. Consequently, role ambiguity is more closely related to such organizational climate factors as openness, and to such general job characteristic factors as job challenge.

Perceptions of Supervision

Workers who perceived their supervisors as incompetent and nonsupportive tended to report more role ambiguity; and those who perceived their supervisors as biased, more role conflict. Supervisors who are seen as incompetent and not supportive would be likely to provide unclear direction, or no direction at all. Those who are seen as biased are likely to be resented or mistrusted by workers, which could cause conflict when the workers are required to take direction from these supervisors.

Supervisory Influence

It is not surprising that role stress was related to discrepancies in supervisors' perceptions of how much influence they felt they actually had and should have. The majority of respondents felt supervisors should have more say than they actually had. The greater the discrepancy, the greater the perceptions of role stress among supervisors.
The extent of role ambiguity and role conflict experienced by supervisors depended on the extent to which they felt they had less control than they should have over various supervisory problems.

**Managerial Practices**

Supervisors' perceptions of four managerial factors—communication, derogating workers, establishing performance standards, and bypassing of supervision—were related to both role ambiguity and role conflict. Supervisors reported more stress when they felt that management failed to communicate or establish clear performance standards, workers were derogated, or supervision was bypassed. Basically, they perceived more role stress when they felt managerial practices were ineffective, which suggests that openness in supervisory and managerial practices may serve to reduce perceptions of role stress among supervisors.

**Results of Multiple Regression Analyses**

**Predictors of Role Ambiguity and Role Conflict**

The relative effects of supervisory influence, organizational climate, and job characteristic variables in predicting role ambiguity and role conflict proved to be enlightening. It appears that perceptions of the openness or cooperative atmosphere existing within the organization are most closely related to supervisors' perceptions of role ambiguity. In general, the organizational climate factors were the best predictors of supervisors' role ambiguity.

For workers, job challenge was most closely related to role ambiguity. Workers who find their job challenging report less role ambiguity. The organizational climate and general job characteristic factors were the best predictors of role ambiguity, whereas more specific job characteristics predicted role conflict, especially for workers. On-the-job concerns such as ethnic problems, material problems, and wasted material and man-hours were all related significantly to role conflict for the workers. It appears that, when problems come up on the job, they lead to role conflict among workers. This is not surprising considering that supervisors are seldom on the job to solve problems.

**Predictors of Satisfaction and Work Center Performance**

Interestingly, role ambiguity was not only related to various organizational variables, but also to intrinsic satisfaction. This is in agreement with Rizzo et al. (1970), who found that satisfaction was more highly related to role ambiguity than to role conflict. Unlike other studies (e.g., Schuler, 1973, 1977a), it was found that the relationship between role ambiguity and intrinsic satisfaction was equally strong for workers and supervisory personnel. This indicates that, if role ambiguity could be reduced, intrinsic satisfaction would increase. For both workers and supervisors, role ambiguity and esprit de corps were the best predictors of intrinsic satisfaction, suggesting that, if esprit de corps were enhanced, satisfaction might improve.

Both role ambiguity and role conflict were highly related to workers' perceptions of the performance of their work center (i.e., an individual's immediate work group and his supervisor). Role stress was not related to supervisors' perceptions of work center performance. This may be due in part to the nature of the job. Workers experiencing role ambiguity or role conflict would be likely to see job quality or job completion as related to stress that prohibits optimal performance on the job. Supervisors, on the other hand, may not see a relationship between their perceived states of role stress and their work...
center's performance. This suggests that, if role stress were reduced for workers, work center performance might be improved. If intrinsic satisfaction and work center performance are accepted as valid indicators of effectiveness, it may be inferred that reductions in role stress would lead to increased effectiveness.
RECOMMENDATIONS

1. Workers at the Public Works Centers (PWCs) expressed more role ambiguity than did those in supervisory and managerial positions. Therefore, they should be provided with accurate and timely information concerning their work, and supervisors should provide sufficient guidelines for successful job completion.

2. In general, managers expressed more role conflict than workers, which may be because of time pressures to complete work. Since these pressures are increased when coordination problems lead to manpower waste, material problems, and planning or scheduling difficulties, steps should be taken to ensure the accuracy of inputs to the control system, which is responsible for disseminating planning and scheduling reports.

3. Workers who perceive their supervisor as more competent, more supportive, and less biased experience less role stress. Thus, to ensure that supervisors have these qualities, selection criteria for supervisors should be revised to include interpersonal skills; supervisory training should be provided to improve existing technical, managerial, and interpersonal competence; and performance standards established for supervisors should be expanded to include personnel management responsibilities.

4. Perceptions of role ambiguity were related to organizational climate (e.g., openness) and to general job characteristics (e.g., reward contingencies). Thus, the timing and form of communication provided by the control system should be improved to ensure that (a) employees perceive supervisors as willing to provide and receive information and (b) employees receive accurate feedback about their performance.

5. Since role stress was related to supervisors' perceptions of managerial practices (e.g., flow of communication, derogation of workers, and bypassing of supervision), managers should be made aware of the possible effect of their policies and procedures on supervisory attitudes and performance. For example, negative consequences may result if a policy aimed at expediting production alienates supervisors.

6. Supervisors expressed more role stress when they had less influence than they felt they should have on work matters. Thus, to ensure that supervisors have realistic expectations concerning their influence, the amount of such influence appropriate for different tasks should be clearly defined.
REFERENCES


Schuler, R. S. Role perceptions, satisfaction, and performance moderated by organization level and participation in decision making. *Academy of Management Journal*, 1977, 20(1), 159-165. (a)

Schuler, R. S. The effects of role perceptions on employee satisfaction and performance moderated by employee ability. *Organizational Behavior and Human Performance*, 1977, 18, 98-107. (b)


APPENDIX A

WORKER QUESTIONNAIRE (FORM A)

D  Demographics
OC Organizational Climate
SJC Specific Job Characteristics
POS Perceptions of Supervisors
SI Supervisory Influence
RS Role Stress
GJC General Job Characteristics
GJC(W) General Job Characteristics (Workers Only)
MP Managerial Practices
JS Job Satisfaction
CV Cultural Values
JV Job Values
E Effectiveness
NAVY PUBLIC WORKS CENTER ATTITUDE INVENTORY

FORM A

The purpose of this survey is to obtain information on the attitudes and opinions of Public Works Center employees regarding their work. It is anticipated that the results derived from your responses will be used to improve the quality of working life and productivity in the Navy Public Works Centers.

For this survey to be of value it is necessary that you be as frank and thoughtful as possible in responding to the items in this questionnaire.

Thank you for your cooperation.

PRIVACY ACT STATEMENT

Information concerning your opinions is requested under authority of 57 USC 301 as reflected in OPNAV Notice 5450 of 17 April 1975. This information will be used by NAVPERSRANDCEN to recommend methods of enhancing PWC effectiveness. The information provided will be combined with that provided by other individuals. Individual responses will not be made available to anyone. You are not required to provide this information; your participation is voluntary.

Developed by:

The Navy Personnel Research and Development Center
San Diego, California 92152
Please WRITE your answer in the space provided.

D 1. What is your job title (that which is listed on your position description)?

D 2. What work center are you assigned to? What is the code number?

D 3. How long have you worked in the PWC system?

D 4. How long have you worked at this Center?

D 5. Age

D 6. Are you an American citizen? If no, specify

D 7. How many dependents do you have? (Others who depend on your income for financial support)?

D 8. Have you ever served in the U. S. Armed Forces? If yes, which branch? How long did you serve?

CIRCLE the letter next to your answer.

D 9. Sex
   A. Male
   B. Female

D 10. The following is a list of ethnic backgrounds for people who work at PWCs. Please CIRCLE the one that comes closest to describing your ethnic background.
   A. Anglo-Saxon
   B. Black or Afro-American
   C. Mexican
   D. Native American Indian
   E. Filipino
   F. Samoan
   G. Chinese
   H. Japanese
   I. Hawaiian
   J. Mediterranean
   K. Slavic

D 11. What is your education level? (CIRCLE the highest grade completed)
   A. Some elementary school (grades 1 to 7)
   B. Completed elementary school (8 grades)
   C. Some high school (9 to 11 years)
   D. Graduated from high school or General Educational Development (GED)
   E. Some college or technical training beyond high school (1 to 3 years)
   F. Graduated from college or university (B.A., B.S., or other bachelor’s degree)
   G. Some graduate school

D 12. How many more years do you plan to work before leaving or retiring from U.S. Government employment? (CIRCLE your answer)
   A. Less than five years
   B. 6-10
   C. 11-15
   D. 16-20
   E. 21 years or more
The following group of items are general questions about working at this PWC. Please CIRCLE the letter in front of the best answer to each item.

**OC 1.** To what extent do rules and regulations interfere with how well you do your job?  
A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all

**OC 2.** To what extent does your job require full use of your skills and abilities?  
A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all

**OC 3.** To what extent is your individual judgment trusted on work matters?  
A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all

**OC 4.** To what extent does cooperation exist between departments at this Center?  
A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all

**OC 5.** To what extent does a cooperative atmosphere exist among people you work with?  
A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all

**OC 6.** How effective is your work center in overcoming unexpected problems?  
A. Exceptionally resourceful  
B. More resourceful than most  
C. Usually overcomes difficulties  
D. Somewhat set back by obstacles  
E. Frequently stumped by obstacles

**OC 7.** To what extent do workers have confidence in management’s judgment?  
A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all

**OC 8.** In this Center about the only source of information on important matters is the grapevine (rumor).  
A. Strongly agree  
B. Agree  
C. Not sure  
D. Disagree  
E. Strongly disagree

**OC 9.** To what extent is your immediate supervisor willing to listen to your problems?  
A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all

**OC 10.** Do people who work here “goof off” if they are not watched?  
A. Almost no one “goofs off”  
B. A few “goof off”  
C. About half “goof off”  
D. A lot “goof off”  
E. Almost everyone “goofs off”

**OC 11.** To what extent do you have to “toe the line” at this Center?  
A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all

**OC 12.** How do you rate your job security in working for this PWC?  
A. Very secure  
B. Somewhat secure  
C. Don’t know  
D. Somewhat insecure  
E. Very insecure
OC 13. To what extent is there an esprit de corps (workgroup pride) among the employees at this PWC?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

OC 15. How would you describe this PWC?
A. Very efficient
B. Efficient
C. Moderately efficient
D. Not very efficient
E. Totally inefficient

OC 16. This PWC is:
A. Very up-to-date
B. Up-to-date
C. Moderately up-to-date
D. Old fashioned
E. Very old fashioned

The following group of questions deal with specific parts of your job. Please CIRCLE the letter in front of the best answer to each item.

<table>
<thead>
<tr>
<th>GJC(w) 1. Job Performance</th>
<th>GJC(w) 5. Time Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your job requires you to be prepared to handle surprising or unpredictable situations.</td>
<td>This job permits no free time.</td>
</tr>
<tr>
<td>A. Very descriptive of your job</td>
<td>A. Very descriptive of your job</td>
</tr>
<tr>
<td>B. Descriptive of your job</td>
<td>B. Descriptive of your job</td>
</tr>
<tr>
<td>C. Somewhat descriptive</td>
<td>C. Somewhat descriptive</td>
</tr>
<tr>
<td>D. A little descriptive of your job</td>
<td>D. A little descriptive of your job</td>
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<tr>
<td>E. Not at all descriptive of your job</td>
<td>E. Not at all descriptive of your job</td>
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<table>
<thead>
<tr>
<th>GJC(w) 2. Time Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>You are frequently interrupted for nonwork-related reasons.</td>
</tr>
<tr>
<td>A. Very descriptive of your job</td>
</tr>
<tr>
<td>B. Descriptive of your job</td>
</tr>
<tr>
<td>C. Somewhat descriptive</td>
</tr>
<tr>
<td>D. A little descriptive of your job</td>
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<tr>
<td>E. Not at all descriptive of your job</td>
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<tr>
<th>GJC(w) 3. Job Performance</th>
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<tbody>
<tr>
<td>Your job allows you to determine your own work pace.</td>
</tr>
<tr>
<td>A. Very descriptive of your job</td>
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<tr>
<td>B. Descriptive of your job</td>
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<tr>
<td>C. Somewhat descriptive</td>
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<td>D. A little descriptive of your job</td>
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<td>E. Not at all descriptive of your job</td>
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<tr>
<th>GJC(w) 4. Time Constraints</th>
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<tbody>
<tr>
<td>You are frequently asked to do excessive amounts of work.</td>
</tr>
<tr>
<td>A. Very descriptive of your job</td>
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<tr>
<td>B. Descriptive of your job</td>
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<tr>
<td>C. Somewhat descriptive</td>
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<tr>
<td>D. A little descriptive of your job</td>
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<td>E. Not at all descriptive of your job</td>
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<tr>
<th>GJC(w) 6. Job Performance</th>
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<tbody>
<tr>
<td>Doing this job gives me a feeling of accomplishment.</td>
</tr>
<tr>
<td>A. Very descriptive of your job</td>
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<tr>
<td>B. Descriptive of your job</td>
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<tr>
<td>C. Somewhat descriptive</td>
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<td>D. A little descriptive of your job</td>
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<td>E. Not at all descriptive of your job</td>
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<tr>
<th>GJC(w) 7. Job Performance</th>
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<tbody>
<tr>
<td>Workers in this work center have good working conditions.</td>
</tr>
<tr>
<td>A. Very descriptive of your job</td>
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<tr>
<td>B. Descriptive of your job</td>
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<tr>
<td>C. Somewhat descriptive</td>
</tr>
<tr>
<td>D. A little descriptive of your job</td>
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<tr>
<td>E. Not at all descriptive of your job</td>
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<tr>
<th>GJC(w) 8. Job Performance</th>
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<tbody>
<tr>
<td>The job requires me to use a number of complex or high-level skills.</td>
</tr>
<tr>
<td>A. Very descriptive of your job</td>
</tr>
<tr>
<td>B. Descriptive of your job</td>
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<tr>
<td>C. Somewhat descriptive</td>
</tr>
<tr>
<td>D. A little descriptive of your job</td>
</tr>
<tr>
<td>E. Not at all descriptive of your job</td>
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</tbody>
</table>
The job requires a lot of cooperative work with other people.

A. Very descriptive of your job  
B. Descriptive of your job  
C. Somewhat descriptive  
D. A little descriptive of your job  
E. Not at all descriptive of your job

The job itself is significant and important in the broader scheme of things.

A. Very descriptive of your job  
B. Descriptive of your job  
C. Somewhat descriptive  
D. A little descriptive of your job  
E. Not at all descriptive of your job

The job can be done adequately by a person working alone — without talking or checking with other people.

A. Very descriptive of your job  
B. Descriptive of your job  
C. Somewhat descriptive  
D. A little descriptive of your job  
E. Not at all descriptive of your job

To what extent are you satisfied with this job?

A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all

To what extent do you feel a very high degree of personal responsibility for the work you do on this job?

A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all

To what extent do you personally care how well the job gets done.

A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all

To what extent do differences in language hinder getting the job done?

A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all

To what extent are you hindered from doing a good job by poor equipment or lack of equipment?

A. To a very great extent  
B. To a great extent  
C. To some extent  
D. To a small extent  
E. Not at all
SJC 21. How safe is the equipment which is supplied to you?
A. Very safe
B. Quite safe
C. Moderately safe
D. Unsafe
E. Very unsafe
F. Not sure

SJC 22. In general you get the material and supplies you need to do the job.
A. Strongly agree
B. Agree
C. Not sure
D. Disagree
E. Strongly disagree

SJC 23. To what extent do people in the Material Department get the proper material to the job site?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all
F. Not sure

SJC 24. How much time do you spend on the job waiting for material to arrive?
A. A great deal
B. Quite a bit
C. Some
D. Little
E. None
F. Not sure

SJC 25. How much material do you see being wasted at PWC?
A. A great deal
B. Quite a bit
C. Some
D. Little
E. None
F. Not sure

SJC 26. To what extent does difficulty in turning materials back in contribute to material waste in this PWC?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all
F. Not sure

SJC 27. To what extent does damaged material delivered contribute to material waste in this PWC?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all
F. Not sure

SJC 28. To what extent does having the wrong material delivered contribute to material waste in this PWC?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all
F. Not sure

SJC 29. To what extent does theft contribute to material waste in this PWC?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all
F. Not sure

SJC 30. To what extent does stockpiling of material (goldpiling) occur in this PWC?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all
F. Not sure

SJC 31. How successful are you in getting material you need in a squeeze or emergency?
A. Very successful
B. Quite successful
C. Somewhat successful
D. Not very successful
E. Not at all successful
F. Not sure

SJC 32. Rate the transportation you use on its safety.
A. Very safe
B. Reasonably safe
C. Not sure
D. Slightly unsafe
E. Very unsafe
<table>
<thead>
<tr>
<th>SJC 33.</th>
<th>How frequently do you experience vehicle breakdown?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Very frequently</td>
<td></td>
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<tr>
<td>B. Frequently</td>
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<tr>
<td>C. Occasionally</td>
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<td>D. Seldom</td>
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<tr>
<td>E. Almost never</td>
<td></td>
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<tr>
<td>F. Not sure</td>
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<thead>
<tr>
<th>SJC 34.</th>
<th>How much would better vehicles increase PWC productivity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. A great deal</td>
<td></td>
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<tr>
<td>B. Quite a bit</td>
<td></td>
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<tr>
<td>C. Some</td>
<td></td>
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<tr>
<td>D. Little</td>
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<tr>
<td>E. There would be no increase</td>
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<tr>
<td>F. Not sure</td>
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<tr>
<th>SJC 35.</th>
<th>The vehicles provided are designed and/or equipped to do the job.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Strongly agree</td>
<td></td>
</tr>
<tr>
<td>B. Agree</td>
<td></td>
</tr>
<tr>
<td>C. Not sure</td>
<td></td>
</tr>
<tr>
<td>D. Disagree</td>
<td></td>
</tr>
<tr>
<td>E. Strongly disagree</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 36.</th>
<th>In general, when PWC employees use PWC vehicles they are treated with care.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Strongly agree</td>
<td></td>
</tr>
<tr>
<td>B. Agree</td>
<td></td>
</tr>
<tr>
<td>C. Not sure</td>
<td></td>
</tr>
<tr>
<td>D. Disagree</td>
<td></td>
</tr>
<tr>
<td>E. Strongly disagree</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 37.</th>
<th>How frequently are there times when there isn't enough work to do?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Very frequently</td>
<td></td>
</tr>
<tr>
<td>B. Frequently</td>
<td></td>
</tr>
<tr>
<td>C. Occasionally</td>
<td></td>
</tr>
<tr>
<td>D. Seldom</td>
<td></td>
</tr>
<tr>
<td>E. Almost never</td>
<td></td>
</tr>
<tr>
<td>F. Not sure</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 38.</th>
<th>How frequently are there more workers than needed to accomplish the work scheduled?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Very frequently</td>
<td></td>
</tr>
<tr>
<td>B. Frequently</td>
<td></td>
</tr>
<tr>
<td>C. Occasionally</td>
<td></td>
</tr>
<tr>
<td>D. Seldom</td>
<td></td>
</tr>
<tr>
<td>E. Almost never</td>
<td></td>
</tr>
<tr>
<td>F. Not sure</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 39.</th>
<th>How frequently do you find that there is more work scheduled than can be accomplished as scheduled?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Very frequently</td>
<td></td>
</tr>
<tr>
<td>B. Frequently</td>
<td></td>
</tr>
<tr>
<td>C. Occasionally</td>
<td></td>
</tr>
<tr>
<td>D. Seldom</td>
<td></td>
</tr>
<tr>
<td>E. Almost never</td>
<td></td>
</tr>
<tr>
<td>F. Not sure</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 40.</th>
<th>Our work center's workload is fairly constant from day to day.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Strongly agree</td>
<td></td>
</tr>
<tr>
<td>B. Agree</td>
<td></td>
</tr>
<tr>
<td>C. Not sure</td>
<td></td>
</tr>
<tr>
<td>D. Disagree</td>
<td></td>
</tr>
<tr>
<td>E. Strongly disagree</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 41.</th>
<th>In general, how much time do you see being spent in nonproductive activity in the PWC?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. A great deal</td>
<td></td>
</tr>
<tr>
<td>B. Quite a bit</td>
<td></td>
</tr>
<tr>
<td>C. Some</td>
<td></td>
</tr>
<tr>
<td>D. Little</td>
<td></td>
</tr>
<tr>
<td>E. Very little</td>
<td></td>
</tr>
<tr>
<td>F. Not sure</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 42.</th>
<th>In general, which area do you see as causing the most problems for work getting done in your work center?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Material</td>
<td></td>
</tr>
<tr>
<td>B. Equipment</td>
<td></td>
</tr>
<tr>
<td>C. Transportation</td>
<td></td>
</tr>
<tr>
<td>D. Do not know</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 43.</th>
<th>How much more do you think most people in your work center could produce if they wanted to?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. A great deal more</td>
<td></td>
</tr>
<tr>
<td>B. Quite a bit more</td>
<td></td>
</tr>
<tr>
<td>C. Moderately more</td>
<td></td>
</tr>
<tr>
<td>D. A little more</td>
<td></td>
</tr>
<tr>
<td>E. People are producing as much as possible</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 44.</th>
<th>If you think that there is time wasted at this PWC, list the major reasons you think cause this waste.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>45.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>46.</td>
<td></td>
</tr>
<tr>
<td>47.</td>
<td></td>
</tr>
</tbody>
</table>

A-8
The following questions are about your supervisor. Please CIRCLE the letter in front of the best answer to each question.

1. To what extent does your supervisor encourage you to participate in important decisions?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

2. To what extent does your supervisor stand up for you or support you?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

3. To what extent does your supervisor see to it that you know what has to be done?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

4. To what extent does your supervisor help you solve work-related problems?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

5. To what extent does your supervisor demand that you do high quality work?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

6. To what extent does your supervisor do a good job of judging your performance?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

7. To what extent is your supervisor competent?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

8. To what extent is your supervisor biased on the basis of race?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

9. To what extent does your supervisor show favoritism?

10. How well does your supervisor know the technical parts of his or her job?
    A. Knows them very well
    B. Knows them quite well
    C. Knows them somewhat
    D. Doesn’t know much
    E. Knows nothing

11. How well does your supervisor know the administrative parts of his or her job?
    A. Knows them very well
    B. Knows them quite well
    C. Knows them somewhat
    D. Doesn’t know much
    E. Knows nothing

12. To what extent does your supervisor help you develop your skills?
    A. To a very great extent
    B. To a great extent
    C. To some extent
    D. To a small extent
    E. Not at all
The following group of questions deal with the personal feelings you have about your day-to-day work. Please CIRCLE the letter in front of the best answer to each item.

1. How important is your job to you compared with other interests in your life?
   A. My job is much more important than my other interests.
   B. My job is somewhat more important than my other interests.
   C. My job is somewhat less important than my other interests.
   D. My job is much less important than my other interests.

2. If I had the chance, I would take a different job within this organization.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree

3. I would like to look for a new job in the next year.
   A. Definitely
   B. I might
   C. Not sure
   D. I doubt it
   E. Definitely not

4. How likely is it that a person who does a good job will be rewarded?
   A. Extremely likely
   B. Likely
   C. Somewhat likely
   D. Unlikely
   E. Extremely unlikely

5. How likely is it that a person who does a poor job will be reprimanded?
   A. Extremely likely
   B. Likely
   C. Somewhat likely
   D. Unlikely
   E. Extremely unlikely

6. My pay is fair considering what other people in this organization are paid.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree

7. My pay is fair considering what people in similar jobs in private industry are making.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree

8. The fringe benefits for working at a PWC are better than one would get in private industry.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree
To what extent do management and the local workforce agree on the following issues:

<table>
<thead>
<tr>
<th>OC</th>
<th>Workforce/Management Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>Supervisory practices A B C D E</td>
</tr>
<tr>
<td>10.</td>
<td>Problems facing this PWC A B C D E</td>
</tr>
<tr>
<td>11.</td>
<td>Individual value systems A B C D E</td>
</tr>
<tr>
<td>12.</td>
<td>The way the world is viewed A B C D E</td>
</tr>
<tr>
<td>13.</td>
<td>The way people are viewed A B C D E</td>
</tr>
</tbody>
</table>

(CIRCLE one letter on each line for your answer)

From the following list, please WRITE in the spaces provided the three MOST IMPORTANT and three LEAST IMPORTANT items in terms of their importance to you on your job.

### Most Important

14. ____________________________________________
15. ____________________________________________
16. ____________________________________________

### Least Important

17. ____________________________________________
18. ____________________________________________
19. ____________________________________________

### Intrinsic

20. How satisfied are you with the respect you receive from the people you work with?
   - A. Very satisfied
   - B. Satisfied
   - C. Neither satisfied nor dissatisfied
   - D. Dissatisfied
   - E. Very dissatisfied

21. How satisfied are you with the chances you have to accomplish something worthwhile?
   - A. Very satisfied
   - B. Satisfied
   - C. Neither satisfied nor dissatisfied
   - D. Dissatisfied
   - E. Very dissatisfied

### Extrinsic

22. How satisfied are you with the amount of pay you get?
   - A. Very satisfied
   - B. Satisfied
   - C. Neither satisfied nor dissatisfied
   - D. Dissatisfied
   - E. Very dissatisfied

23. How satisfied are you with your chances for getting ahead in this PWC?
   - A. Very satisfied
   - B. Satisfied
   - C. Neither satisfied nor dissatisfied
   - D. Dissatisfied
   - E. Very dissatisfied

24. How satisfied are you with the amount of job security you have?
   - A. Very satisfied
   - B. Satisfied
   - C. Neither satisfied nor dissatisfied
   - D. Dissatisfied
   - E. Very dissatisfied
JS 25. How satisfied are you with the opportunity to develop your skills and abilities?

A. Very satisfied
B. Satisfied
C. Neither satisfied nor dissatisfied
D. Dissatisfied
E. Very dissatisfied

JS 26. How satisfied are you with recognition for doing the job?

A. Very satisfied
B. Satisfied
C. Neither satisfied nor dissatisfied
D. Dissatisfied
E. Very dissatisfied

JS 27. How satisfied are you with seeing the results from your work?

A. Very satisfied
B. Satisfied
C. Neither satisfied nor dissatisfied
D. Dissatisfied
E. Very dissatisfied

JS 28. How satisfied are you with having a job you don’t take home?

A. Very satisfied
B. Satisfied
C. Neither satisfied nor dissatisfied
D. Dissatisfied
E. Very dissatisfied
F. I do take work home

RS 29. To what extent do you work under conflicting policies and guidelines?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 30. To what extent do you receive assignments without the manpower to complete them?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 31. To what extent do you do things that are likely to be accepted by one person and not accepted by others?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 32. To what extent do you know if your work will be acceptable to your boss?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 33. To what extent is it difficult to satisfy everybody at the same time?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 34. To what extent do you have to break rules to get everything done on your job?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 35. To what extent do people ask you to do things on your job which get in the way of your work?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 36. To what extent do you feel certain about how much authority you have?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all
RS 37. To what extent do you know what your responsibilities are?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 38. To what extent do you feel certain about how you will be evaluated for a raise or promotion?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 39. To what extent do you know exactly what is expected of you?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 40. To what extent do you know that you have divided your time properly?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 41. To what extent are explanations clear about what has to be done?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 42. To what extent are you given enough time to do what is expected of you on your job?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 43. To what extent does it seem like you have too much work for one person to do?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 44. To what extent are the performance standards on your job too high?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

Each of the next four questions is followed by five answer spaces. Please WRITE your answers in the spaces provided for each question.

1. What are some of the specific things which occur at work that make you feel good about working?

A. ______________________________________________________
B. _________________________________________________________________
C. ___________________________________________________________________
D. ____________________________________________________________
E. ___________________________________________________________________________
2. What specific kinds of things occur at work that turn you off, frustrate you or make you angry?
   A. __________________________________________
   B. __________________________________________
   C. __________________________________________
   D. __________________________________________
   E. __________________________________________

3. If you had your way and could do anything, what things would you do to make your work life better?
   A. __________________________________________
   B. __________________________________________
   C. __________________________________________
   D. __________________________________________
   E. __________________________________________

4. If you had your way and could do anything, what things would you do to improve the productivity of this PWC?
   A. __________________________________________
   B. __________________________________________
   C. __________________________________________
   D. __________________________________________
   E. __________________________________________
Please CIRCLE the letter in front of the best answer for each item.

**OC 1.** Overall, what effect do unions have on the PWC operation?
- A. Very positive
- B. Positive
- C. No effect
- D. Negative
- E. Very negative
- F. No opinion

**OC 2.** To what extent does employee theft present a problem at your PWC?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all

**OC 3.** To what extent do you think there are problems between people of different ethnic backgrounds in your work center?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all

**OC 4.** To what extent do problems between people of different ethnic backgrounds hurt your work center's performance?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all

**5.** In what way do you think "command interest" jobs affect productivity at this PWC?
- A. Greatly increase productivity
- B. Slightly increase productivity
- C. Do not affect productivity
- D. Slightly decrease productivity
- E. Greatly decrease productivity
- F. Do not know

**6.** To what extent is the "command interest" category abused?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all
- F. Do not know

**7.** To what extent does work on "command interest" jobs interfere with everyday work accomplishments?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all
- F. Do not know

**OC 8.** What effect does military turnover have on the effectiveness of this PWC?
- A. Very positive
- B. Positive
- C. No effect either way
- D. Negative
- E. Very negative
- F. Do not know

**OC 9.** What effect does military management have on vertical communications both up and down?
- A. Communications are improved greatly
- B. Communications are improved to some extent
- C. There is no effect on communications
- D. Communications are hampered slightly
- E. Communications are hampered greatly
- F. Do not know

**OC 10.** In general, the opinion of military toward civilians is:
- A. Very high
- B. High
- C. Neutral
- D. Low
- E. Very low

A-15
OC 11. Perceptions of Military Management
In general, the opinion of civilians toward the military is:
A. Very high
B. High
C. Neutral
D. Low
E. Very low

OC 12. Perceptions of Military Management
Overall, rate military management in terms of their ability to deal with personnel matters.
A. Very good
B. Good
C. Fair
D. Poor
E. Very poor
F. No opinion

OC 13. Perceptions of Military Management
Overall, rate the military management in terms of their financial management skills.
A. Very good
B. Good
C. Fair
D. Poor
E. Very poor
F. No opinion

OC 14. Perceptions of Military Management
To what extent do you see military management as being necessary for the successful operation of this PWC?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

Rate your work center in terms of how well it does in the following areas:

18. Productivity—amount and quality of work accomplished for money and time spent.

A. Very Good (A)  B. Good (B)  C. Fair (C)  D. Poor (D)  E. Very Poor (E)

19. Responsiveness—ability of PWC to start and complete work quickly.

A. Very Good (A)  B. Good (B)  C. Fair (C)  D. Poor (D)  E. Very Poor (E)

20. Adaptability—ability to meet changing conditions and demands.

A. Very Good (A)  B. Good (B)  C. Fair (C)  D. Poor (D)  E. Very Poor (E)

21. Customer Satisfaction—extent to which customers are satisfied with PWC performance.

A. Very Good (A)  B. Good (B)  C. Fair (C)  D. Poor (D)  E. Very Poor (E)
The following group of items deal with your feelings about life in general. Please CIRCLE the letter in front of the best answer for each item.

1. Obedience and respect for authority.
   A. Very important
   B. Important
   C. Somewhat important
   D. Slightly important
   E. Not at all important

2. Working hard to improve the prestige and status of one's group.
   A. Very important
   B. Important
   C. Somewhat important
   D. Slightly important
   E. Not at all important

3. Getting recognition for one's achievements.
   A. Very important
   B. Important
   C. Somewhat important
   D. Slightly important
   E. Not at all important

4. Prestige. To become well-known to obtain recognition, awards or high social status.
   A. Very important
   B. Important
   C. Somewhat important
   D. Slightly important
   E. Not at all important

5. Wealth. To earn a great deal of money.
   A. Very important
   B. Important
   C. Somewhat important
   D. Slightly important
   E. Not at all important

   A. Very important
   B. Important
   C. Somewhat important
   D. Slightly important
   E. Not at all important

7. Self-realization. To get the most from one's personal development.
   A. Very important
   B. Important
   C. Somewhat important
   D. Slightly important
   E. Not at all important

8. Duty. To dedicate oneself totally to ideals and principles.
   A. Very important
   B. Important
   C. Somewhat important
   D. Slightly important
   E. Not at all important

9. Pleasure. To enjoy life, to be happy and content, to have the good things in life.
   A. Very important
   B. Important
   C. Somewhat important
   D. Slightly important
   E. Not at all important
From the following list, please write in the space provided the four MOST IMPORTANT and four LEAST IMPORTANT things for a person to be.

Most Important

10. ____________________________________________
11. ____________________________________________
12. ____________________________________________
13. ____________________________________________

CV

Least Important

14. ____________________________________________
15. ____________________________________________
16. ____________________________________________
17. ____________________________________________

Please CIRCLE the letter in front of the best answer to each question.

1. Are you encouraged to participate in decisions that affect you?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

2. Some people are given special privileges.
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

3. When things go wrong it is the workers who are usually blamed.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree

4. Information is withheld from workers, even though it is readily available and could help.
   A. Almost always
   B. Often
   C. Sometimes
   D. Rarely
   E. Never

5. Good ideas don’t get communicated upward because top management is not very approachable.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree

6. How frequently are suggestions made to top management
   A. Very frequently
   B. Frequently
   C. Occasionally
   D. Seldom
   E. Almost never

7. Suggestions made to top management receive fair evaluation.
   A. Almost always
   B. Often
   C. Sometimes
   D. Rarely
   E. Never
8. Management and supervisors set up interrelated jobs and work activities so that the work flows smoothly.
   A. Strongly agree  
   B. Agree  
   C. Not sure  
   D. Disagree  
   E. Strongly disagree

9. Workers are given direct orders by someone other than immediate supervisors.
   A. Almost always  
   B. Often  
   C. Sometimes  
   D. Rarely  
   E. Never

10. Management bypasses levels below them in assigning work.
    A. Almost always  
    B. Often  
    C. Sometimes  
    D. Rarely  
    E. Never

11. Top management is interested in ideas and suggestions from people at different levels in the organization.
    A. Almost always  
    B. Often  
    C. Sometimes  
    D. Rarely  
    E. Never

12. When problems are encountered, those in authority make prompt decisions or recommendations.
    A. Almost always  
    B. Often  
    C. Sometimes  
    D. Rarely  
    E. Never

13. In general, how would you rate the customer’s understanding of how the PWC operates?
    A. Very good  
    B. Good  
    C. Fair  
    D. Poor  
    E. Very poor  
    F. Do not know

14. How often do job changes requested by customers cause unnecessary hardship on the efficiency of PWC?
    A. Almost always  
    B. Often  
    C. Sometimes  
    D. Rarely  
    E. Never
To what extent could job changes initiated by the customer be avoided if:

15. Customers provided a better description of the work.
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not know

16. Customers didn’t change their minds so often.
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not know

17. Management would teach customers about the PWC operation.
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not know

18. There was better communication between customers and planning.
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not know

19. To what extent is the quality of work performed by contractors better than that of PWC?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. No opinion

20. PWC ends up having to redo much of a contractor’s job.
   A. Almost always
   B. Often
   C. Sometimes
   D. Rarely
   E. Never
   F. Do not know

21. To what extent are contractors evaluated on the same standards of performance as PWCs?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not know
To what extent are the following codes (departments) helpful to you in getting your work done? (CIRCLE the letter on each line for your answer.)

<table>
<thead>
<tr>
<th>Code</th>
<th>Activity Civil Engineer Office</th>
<th>Management Office</th>
<th>Civilian Personnel Office</th>
<th>Comptroller Office</th>
<th>Housing Office</th>
<th>Engineering Department</th>
<th>Maintenance Control Department</th>
<th>Maintenance Department</th>
<th>Utilities Department</th>
<th>Transportation Department</th>
<th>Material Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<td>2.</td>
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<td>3.</td>
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<td>4.</td>
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<td>5.</td>
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<td>7.</td>
<td>A</td>
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<td>8.</td>
<td>A</td>
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<td>C</td>
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<tr>
<td>9.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>10.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>11.</td>
<td>A</td>
<td>B</td>
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<td>D</td>
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<tr>
<td>12.</td>
<td>If you have difficulty working with another work center, name it and list the reasons.</td>
<td></td>
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</tr>
</tbody>
</table>

13. How familiar are you with PMS?
   A. Very familiar
   B. Familiar
   C. Somewhat familiar
   D. Not very familiar
   E. Never heard of it

14. The actual time charge to a job reflects the actual hours worked on the job.
   A. Almost always
   B. Often
   C. Sometimes
   D. Rarely
   E. Almost never

15. How often do P&Es plan and estimate jobs within their own trade?
   A. Very frequently
   B. Frequently
   C. Not sure
   D. Seldom
   E. Almost never

16. To what extent do P&Es know about the latest developments in their field?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not know
17. In general, P&Es are trained to do the work required of them.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree

18. Is the ratio of P&E hours to production hours set by NAVFAC realistic?
   A. Yes
   B. No
   C. Not sure

<table>
<thead>
<tr>
<th>To a very great extent</th>
<th>To a great extent</th>
<th>To some extent</th>
<th>To a small extent</th>
<th>Not at all</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>(D)</td>
<td>(E)</td>
<td>(F)</td>
</tr>
</tbody>
</table>

Quite often there are changes in the job. To what extent is this a result of:

19. A customer changing his mind
   A. A
   B. B
   C. C
   D. D
   E. E
   F. F

20. Poor planning and estimating
   A. A
   B. B
   C. C
   D. D
   E. E
   F. F

21. Poor job description from ACE
   A. A
   B. B
   C. C
   D. D
   E. E
   F. F

22. A fact of life due to the nature of rehabilitative construction work
   A. A
   B. B
   C. C
   D. D
   E. E
   F. F

23. Poor quality of work
   A. A
   B. B
   C. C
   D. D
   E. E
   F. F

24. Where do you think the job plan should be developed?
   A. In Planning and Estimating
   B. In the Maintenance Department
   C. Not sure

25. How often should a P&E go to the job site and see what needs to be done?
   A. Very frequently
   B. Frequently
   C. Not sure
   D. Seldom
   E. Almost never

26. How often do P&Es visit the job site?
   A. Very frequently
   B. Frequently
   C. Not sure
   D. Seldom
   E. Almost never

27. The P&Es do all they can to visit job sites but are too overworked and can’t get to as many as they should.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree

28. To what extent are the job plans helpful in getting the work done?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not know
29. To what extent are the job schedules that are set up, meet the work required?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Not sure

30. Should the schedulers be located in the shops or centrally located?
   A. In the shops
   B. Centrally located
   C. No opinion

31. When people from the different departments work together to complete a job, the work activities are well planned.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree

How much does your supervisor have to say in making decisions about:

<table>
<thead>
<tr>
<th>Task</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>32. How you do your work</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>33. Scheduling your work activities</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>34. How to handle problems you face in your work</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>35. Hiring of people</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>36. Pay raises</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>37. Firing people</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>38. Promoting people</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>39. When people take time off</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>40. What you should do when something unexpected happens</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>41. Settling disagreements</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>
How much say should your supervisor actually have in making decisions about:

42. How you do your work
43. Scheduling your work activities
44. How to handle problems you face in your work
45. Hiring people
46. Pay raises
47. Firing people
48. Promoting people
49. When people take time off
50. What you should do when something unexpected happens
51. Settling disagreements

52. How often does your immediate Supervisor check to see how you are doing your job?
   A. Very often
   B. Often
   C. Occasionally
   D. Seldom
   E. Almost never

53. How much does your supervisor know about your on-the-job performance?
   A. Knows a lot
   B. Knows quite a bit
   C. Knows something
   D. Knows little
   E. Knows very little

54. To what extent are performance standards established for your job?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

55. To what extent do performance ratings measure how well you do your job?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

56. In this PWC, to what extent are threats and punishments used as a way to get people to do better work?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

57. To what extent do workers participate in making important decisions related to their work?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
How much influence do the following groups or persons actually have on what happens in this Center?

<table>
<thead>
<tr>
<th></th>
<th>A very great deal of influence (A)</th>
<th>Quite a lot of influence (B)</th>
<th>Some influence (C)</th>
<th>Little influence (D)</th>
<th>Very little influence (E)</th>
<th>Not sure (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>58. Navy managers</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>59. Civilian managers</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>60. Supervisors</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>61. The workers</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
</tbody>
</table>

THANK YOU FOR YOUR COOPERATION
APPENDIX B

SUPERVISORY PERSONNEL QUESTIONNAIRE (FORM B)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Demographics</td>
</tr>
<tr>
<td>OC</td>
<td>Organizational Climate</td>
</tr>
<tr>
<td>SJC</td>
<td>Specific Job Characteristics</td>
</tr>
<tr>
<td>POS</td>
<td>Perceptions of Supervisors</td>
</tr>
<tr>
<td>SI</td>
<td>Supervisory Influence</td>
</tr>
<tr>
<td>RS</td>
<td>Role Stress</td>
</tr>
<tr>
<td>GJC</td>
<td>General Job Characteristics</td>
</tr>
<tr>
<td>GJC(W)</td>
<td>General Job Characteristics (Workers Only)</td>
</tr>
<tr>
<td>MP</td>
<td>Managerial Practices</td>
</tr>
<tr>
<td>JS</td>
<td>Job Satisfaction</td>
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<tr>
<td>CV</td>
<td>Cultural Values</td>
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<tr>
<td>JV</td>
<td>Job Values</td>
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<tr>
<td>E</td>
<td>Effectiveness</td>
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</tbody>
</table>
NAVY PUBLIC WORKS CENTER ATTITUDE INVENTORY

FORM B

The purpose of this survey is to obtain information on the attitudes and opinions of Public Works Center employees regarding their work. It is anticipated that the results derived from your responses will be used to improve the quality of working life and productivity in the Navy Public Works Centers.

For this survey to be of value it is necessary that you be as frank and thoughtful as possible in responding to the items in this questionnaire.

Thank you for your cooperation.

PRIVACY ACT STATEMENT

Information concerning your opinions is requested under authority of 57 USC 301 as reflected in OPNAV Notice 5450 of 17 April 1975. This information will be used by NAVPERSRANDCEN to recommend methods of enhancing PWC effectiveness. The information provided will be combined with that provided by other individuals. Individual responses will not be made available to anyone. You are not required to provide this information; your participation is voluntary.

Developed by:

The Navy Personnel Research and Development Center
San Diego, California 92152
Please WRITE your answer in the space provided.

D 1. Are you military or civilian? __________________________

D 2. What is your job title (that which is listed on your position description)? __________________________

D 3. What work center are you assigned to? __________________________________________

What is the code number? ___________________

D 4. How long have you worked in the PWC system? _________________________________

D 5. How long have you worked at this Center? __________________________

D 6. Age ______

D 7. Are you an American citizen? Yes/No If no, specify ________________________________

D 8. How many dependents do you have? (Others who depend on your income for financial support)? __________________________

D 9. Have you ever served in the U. S. Armed Forces? Yes/No If yes, which branch? __________________________

How long did you serve? __________________________

CIRCLE the letter next to your answer.

D 10. Sex

A. Male

B. Female

D 11. The following is a list of ethnic backgrounds for people who work at PWCs. Please CIRCLE the one that comes closest to describing your ethnic background.

A. Anglo-Saxon

B. Black or Afro-American

C. Mexican

D. Native American Indian

E. Filipino

F. Samoan

G. Chinese

H. Japanese

I. Hawaiian

J. Mediterranean

K. Slavic

D 12. What is your education level? (CIRCLE the highest grade completed)

A. Some elementary school (grades 1 to 7)

B. Completed elementary school (8 grades)

C. Some high school (9 to 11 years)

D. Graduated from high school or General Educational Development (GED)

E. Some college or technical training beyond high school (1 to 3 years)

F. Graduated from college or university (B. A., B. S., or other bachelor's degree)

G. Some graduate school

H. Graduate or professional degree (please indicate) __________________________

D 13. How many more years do you plan to work before leaving or retiring from U. S. government employment? (CIRCLE your answer)

A. Less than five years

B. 6-10

C. 11-15

D. 16-20

E. 21 years or more

B-3
The following group of items are general questions about working at this PWC. Please CIRCLE the letter in front of the best answer to each item.

**OC 1.** To what extent do rules and regulations interfere with how well you do your job?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all

**OC 7.** To what extent do workers have confidence in management’s judgment?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all

**OC 2.** To what extent does your job require full use of your skills and abilities?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all

**OC 8.** In this Center about the only source of information on important matters is the grapevine (rumor).
- A. Strongly agree
- B. Agree
- C. Not sure
- D. Disagree
- E. Strongly disagree

**OC 3.** To what extent is your individual judgment trusted on work matters?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all

**OC 9.** To what extent is your immediate supervisor willing to listen to your problems?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all

**OC 4.** To what extent does cooperation exist between departments at this Center?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all

**OC 10.** Do people who work here “goof off” if they are not watched?
- A. Almost no one “goofs off”
- B. A few “goofs off”
- C. About half “goofs off”
- D. A lot “goofs off”
- E. Almost everyone “goofs off”

**OC 5.** To what extent does a cooperative atmosphere exists among people you work with?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all

**OC 11.** To what extent do you have to “toe the line” at this Center?
- A. To a very great extent
- B. To a great extent
- C. To some extent
- D. To a small extent
- E. Not at all

**OC 6.** How effective is your work center in overcoming unexpected problems?
- A. Exceptionally resourceful
- B. More resourceful than most
- C. Usually overcomes difficulties
- D. Somewhat set back by obstacles
- E. Frequently stumped by obstacles

**OC 12.** How do you rate your job security in working for this PWC?
- A. Very secure
- B. Somewhat secure
- C. Don’t know
- D. Somewhat insecure
- E. Very insecure
13. To what extent is there an esprit de corps (workgroup pride) among the employees at this PWC?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

14. Which of the following is most important in getting promoted?

A. Seniority
B. Competence or ability
C. Personal relationships
D. The department you’re in
E. Work output

15. How would you describe this PWC?

A. Very efficient
B. Efficient
C. Moderately efficient
D. Not very efficient
E. Totally inefficient

16. This PWC is:

A. Very up-to-date
B. Up-to-date
C. Moderately up-to-date
D. Old fashioned
E. Very old fashioned

17. The job denies me any chance to use my personal initiative or judgment in carrying out the work.

A. Very descriptive of your job
B. Descriptive of your job
C. Somewhat descriptive
D. A little descriptive of your job
E. Not at all descriptive of your job

18. The job gives me considerable opportunity for independence and freedom in how I do the work.

A. Very descriptive of your job
B. Descriptive of your job
C. Somewhat descriptive
D. A little descriptive of your job
E. Not at all descriptive of your job

19. The job itself is significant and important in the broader scheme of things.

A. Very descriptive of your job
B. Descriptive of your job
C. Somewhat descriptive
D. A little descriptive of your job
E. Not at all descriptive of your job

20. To what extent are you satisfied with this job?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

21. To what extent do you feel a very high degree of personal responsibility for the work you do on this job?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

22. To what extent do you personally care how well the job gets done.

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

23. To what extent do differences in language hinder getting the job done?

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

24. How safe is the equipment which is supplied to PWC employees?

A. Very safe
B. Quite safe
C. Moderately safe
D. Unsafe
E. Very unsafe
F. Not sure
<table>
<thead>
<tr>
<th>SJC 25.</th>
<th>In general workers get the material and supplies they need to do the job.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>A. Strongly agree</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 26.</th>
<th>To what extent do people in the Material Department get the proper material to the job site?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>A. To a very great extent</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 27.</th>
<th>How much time do you think workers spend on the job waiting for material to arrive?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>A. A great deal</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 28.</th>
<th>How much material do you think is being wasted at PWC?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>A. A great deal</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 29.</th>
<th>To what extent do the procedures for turning materials back in contribute to material waste in this PWC?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>A. To a very great extent</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 30.</th>
<th>To what extent does damaged material delivered contribute to material waste in this PWC?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>A. To a very great extent</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 31.</th>
<th>To what extent does having the wrong material delivered contribute to material waste in this PWC?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>A. To a very great extent</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 32.</th>
<th>To what extent does theft contribute to material waste in this PWC?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>A. To a very great extent</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 33.</th>
<th>To what extent does stockpiling of material (goldpiling) occur in this PWC?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>A. To a very great extent</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SJC 34.</th>
<th>How successful are workers in getting the material they need in a squeeze or emergency?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>A. Very successful</strong></td>
</tr>
</tbody>
</table>
SJC 35. Rate the transportation that this PWC uses on its safety.
A. Very safe
B. Reasonably safe
C. Not sure
D. Slightly unsafe
E. Very unsafe

SJC 36. How frequently do workers experience vehicle breakdown?
A. Very frequently
B. Frequently
C. Occasionally
D. Seldom
E. Almost never
F. Not sure

SJC 37. How much would better vehicles increase PWC productivity?
A. A great deal
B. Quite a bit
C. Some
D. Little
E. There would be no increase
F. Not sure

SJC 38. The vehicles provided are designed and/or equipped to do the job.
A. Strongly agree
B. Agree
C. Not sure
D. Disagree
E. Strongly disagree

SJC 39. In general, when PWC employees use PWC vehicles they are treated with care.
A. Strongly agree
B. Agree
C. Not sure
D. Disagree
E. Strongly disagree

SJC 40. How frequently are there times when there isn’t enough work to keep the workforce busy?
A. Very frequently
B. Frequently
C. Occasionally
D. Seldom
E. Almost never
F. Not sure

SJC 41. How frequently are there more workers than needed to accomplish the work scheduled?
A. Very frequently
B. Frequently
C. Occasionally
D. Seldom
E. Almost never
F. Not sure

SJC 42. How frequently do you find that there is more work scheduled than can be accomplished as scheduled?
A. Very frequently
B. Frequently
C. Occasionally
D. Seldom
E. Almost never
F. Not sure

SJC 43. Our work center’s workload is fairly constant from day to day.
A. Strongly agree
B. Agree
C. Not sure
D. Disagree
E. Strongly disagree

SJC 44. In general, how much time do you see being spent in nonproductive activity in the PWC?
A. A great deal
B. Quite a bit
C. Some
D. Little
E. Very little
F. Not sure

SJC 45. In general, which area do you see as causing the most problems for work getting done in your work center?
A. Material
B. Equipment
C. Transportation
D. Do not know

SJC 46. How much more do you think most people in your work center could produce if they wanted to?
A. A great deal more
B. Quite a bit more
C. Moderately more
D. A little more
E. People are producing as much as possible
47. If you think that there is time wasted at this PWC, list the major reasons you think cause this waste.

The following group of questions deal with the personal feelings you have about your day-to-day work. Please CIRCLE the letter in front of the best answer to each item.

1. How important is your job to you compared with other interests in your life?
   A. My job is much more important than my other interests.
   B. My job is somewhat more important than my other interests.
   C. My job is somewhat less important than my other interests.
   D. My job is much less important than my other interests.

2. If I had the chance, I would take a different job within this organization.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree

3. I would like to look for a new job in the next year.
   A. Definitely
   B. I might
   C. Not sure
   D. I doubt it
   E. Definitely not

4. How likely is it that a person who does a good job will be rewarded?
   A. Extremely likely
   B. Likely
   C. Somewhat likely
   D. Unlikely
   E. Extremely unlikely

5. How likely is it that a person who does a poor job will be reprimanded?
   A. Extremely likely
   B. Likely
   C. Somewhat likely
   D. Unlikely
   E. Extremely unlikely

6. My pay is fair considering what other people in this organization are paid.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree

7. My pay is fair considering what people in similar jobs in private industry are making.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree

8. The fringe benefits for working at a PWC are better than one would get in private industry.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree
To what extent do management and the local workforce agree on the following issues:

<table>
<thead>
<tr>
<th>OC</th>
<th>Workforce/Management Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>Supervisory practices A B C D E</td>
</tr>
<tr>
<td>10.</td>
<td>Problems facing this PWC A B C D E</td>
</tr>
<tr>
<td>11.</td>
<td>Individual value systems A B C D E</td>
</tr>
<tr>
<td>12.</td>
<td>The way the world is viewed A B C D E</td>
</tr>
<tr>
<td>13.</td>
<td>The way people are viewed A B C D E</td>
</tr>
</tbody>
</table>

From the following list, please WRITE in the spaces provided the three MOST IMPORTANT and three LEAST IMPORTANT items in terms of their importance to you on your job.

**Most Important**

| 14. | ________________________________ |
| 15. | ________________________________ |
| 16. | ________________________________ |

**Least Important**

| 17. | ________________________________ |
| 18. | ________________________________ |
| 19. | ________________________________ |

**JS Intrinsic**

- 20. How satisfied are you with the respect you receive from the people you work with? A. Very satisfied B. Satisfied C. Neither satisfied nor dissatisfied D. Dissatisfied E. Very dissatisfied

**JS Extrinsic**

- 21. How satisfied are you with the chances you have to accomplish something worthwhile? A. Very satisfied B. Satisfied C. Neither satisfied nor dissatisfied D. Dissatisfied E. Very dissatisfied

**JS Intrinsic**

- 22. How satisfied are you with the amount of pay you get? A. Very satisfied B. Satisfied C. Neither satisfied nor dissatisfied D. Dissatisfied E. Very dissatisfied

**JS Extrinsic**

- 23. How satisfied are you with your chances for getting ahead in this PWC? A. Very satisfied B. Satisfied C. Neither satisfied nor dissatisfied D. Dissatisfied E. Very dissatisfied

**JS Extrinsic**

- 24. How satisfied are you with the amount of job security you have? A. Very satisfied B. Satisfied C. Neither satisfied nor dissatisfied D. Dissatisfied E. Very dissatisfied

**JS Intrinsic**

- 25. How satisfied are you with the opportunity to develop your skills and abilities? A. Very satisfied B. Satisfied C. Neither satisfied nor dissatisfied D. Dissatisfied E. Very dissatisfied
<table>
<thead>
<tr>
<th>JS 26. How satisfied are you with recognition for doing the job?</th>
<th>RS 32. To what extent do you know if your work will be acceptable to your boss?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Very satisfied</td>
<td>A. To a very great extent</td>
</tr>
<tr>
<td>B. Satisfied</td>
<td>B. To a great extent</td>
</tr>
<tr>
<td>C. Neither satisfied nor dissatisfied</td>
<td>C. To some extent</td>
</tr>
<tr>
<td>D. Dissatisfied</td>
<td>D. To a small extent</td>
</tr>
<tr>
<td>E. Very dissatisfied</td>
<td>E. Not at all</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JS 27. How satisfied are you with seeing the results from your work?</th>
<th>RS 33. To what extent is it difficult to satisfy everybody at the same time?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Very satisfied</td>
<td>A. To a very great extent</td>
</tr>
<tr>
<td>B. Satisfied</td>
<td>B. To a great extent</td>
</tr>
<tr>
<td>C. Neither satisfied nor dissatisfied</td>
<td>C. To some extent</td>
</tr>
<tr>
<td>D. Dissatisfied</td>
<td>D. To a small extent</td>
</tr>
<tr>
<td>E. Very dissatisfied</td>
<td>E. Not at all</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JS 28. How satisfied are you with having a job you don't take home?</th>
<th>RS 34. To what extent do you have to break rules to get everything done on your job?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Very satisfied</td>
<td>A. To a very great extent</td>
</tr>
<tr>
<td>B. Satisfied</td>
<td>B. To a great extent</td>
</tr>
<tr>
<td>C. Neither satisfied nor dissatisfied</td>
<td>C. To some extent</td>
</tr>
<tr>
<td>D. Dissatisfied</td>
<td>D. To a small extent</td>
</tr>
<tr>
<td>E. Very dissatisfied</td>
<td>E. Not at all</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RS 29. To what extent do you work under conflicting policies and guidelines?</th>
<th>RS 35. To what extent do people ask you to do things on your job which get in the way of your work?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. To a very great extent</td>
<td>A. To a very great extent</td>
</tr>
<tr>
<td>B. To a great extent</td>
<td>B. To a great extent</td>
</tr>
<tr>
<td>C. To some extent</td>
<td>C. To some extent</td>
</tr>
<tr>
<td>D. To a small extent</td>
<td>D. To a small extent</td>
</tr>
<tr>
<td>E. Not at all</td>
<td>E. Not at all</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RS 30. To what extent do you receive assignments without the manpower to complete them?</th>
<th>RS 36. To what extent do you feel certain about how much authority you have?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. To a very great extent</td>
<td>A. To a very great extent</td>
</tr>
<tr>
<td>B. To a great extent</td>
<td>B. To a great extent</td>
</tr>
<tr>
<td>C. To some extent</td>
<td>C. To some extent</td>
</tr>
<tr>
<td>D. To a small extent</td>
<td>D. To a small extent</td>
</tr>
<tr>
<td>E. Not at all</td>
<td>E. Not at all</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RS 31. To what extent do you do things that are likely to be accepted by one person and not accepted by others?</th>
<th>RS 37. To what extent do you know what your responsibilities are?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. To a very great extent</td>
<td>A. To a very great extent</td>
</tr>
<tr>
<td>B. To a great extent</td>
<td>B. To a great extent</td>
</tr>
<tr>
<td>C. To some extent</td>
<td>C. To some extent</td>
</tr>
<tr>
<td>D. To a small extent</td>
<td>D. To a small extent</td>
</tr>
<tr>
<td>E. Not at all</td>
<td>E. Not at all</td>
</tr>
</tbody>
</table>
RS 38. To what extent do you feel certain about how you will be evaluated for a raise or promotion?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 39. To what extent do you know exactly what is expected of you?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 40. To what extent do you know that you have divided your time properly?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 41. To what extent are explanations clear about what has to be done?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 42. To what extent are you given enough time to do what is expected of you on your job?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 43. To what extent does it seem like you have too much work for one person to do?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

RS 44. To what extent are the performance standards on your job too high?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

Each of the next four questions is followed by five answer spaces. Please WRITE your answers in the spaces provided for each question.

1. What are some of the specific things which occur at work that make you feel good about working?
A. ____________________________________________________________
B. ____________________________________________________________
C. ____________________________________________________________
D. ____________________________________________________________
E. ____________________________________________________________
2. What specific kinds of things occur at work that turn you off, frustrate you or make you angry?
   A. ________________________________
   B. ________________________________
   C. ________________________________
   D. ________________________________
   E. ________________________________

3. If you had your way and could do anything, what things would you do to make your work life better?
   A. ________________________________
   B. ________________________________
   C. ________________________________
   D. ________________________________
   E. ________________________________

4. If you had your way and could do anything, what things would you do to improve the productivity of this PWC?
   A. ________________________________
   B. ________________________________
   C. ________________________________
   D. ________________________________
   E. ________________________________
Please CIRCLE the letter in front of the best answer for each item.

| OC 1. Overall, what effect do unions have on the PWC operation? |
|-------------------------|--------------------------|
| A. Very positive        | B. Positive              |
| C. No effect            | D. Negative              |
| E. Very negative        | F. No opinion            |

| OC 2. To what extent does employee theft present a problem at your PWC? |
|-------------------------|--------------------------|
| A. To a very great extent |
| B. To a great extent     |
| C. To some extent        |
| D. To a small extent     |
| E. Not at all            |

| OC 3. To what extent do you think there are problems between people of different ethnic backgrounds in your work center? |
|-------------------------|--------------------------|
| A. To a very great extent |
| B. To a great extent     |
| C. To some extent        |
| D. To a small extent     |
| E. Not at all            |

| OC 4. To what extent do problems between people of different ethnic backgrounds hurt your work center's performance? |
|-------------------------|--------------------------|
| A. To a very great extent |
| B. To a great extent     |
| C. To some extent        |
| D. To a small extent     |
| E. Not at all            |

| OC 5. In what way do you think “command interest” jobs affect productivity at this PWC? |
|-------------------------|--------------------------|
| A. Greatly increase productivity |
| B. Slightly increase productivity |
| C. Do not affect productivity |
| D. Slightly decrease productivity |
| E. Greatly decrease productivity |
| F. Do not know |

| OC 6. To what extent is the “command interest” category abused? |
|-------------------------|--------------------------|
| A. To a very great extent |
| B. To a great extent     |
| C. To some extent        |
| D. To a small extent     |
| E. Not at all            |
| F. Do not know |

| OC 7. To what extent does work on “command interest” jobs interfere with everyday work accomplishments? |
|-------------------------|--------------------------|
| A. To a very great extent |
| B. To a great extent     |
| C. To some extent        |
| D. To a small extent     |
| E. Not at all            |
| F. Do not know |

| OC 8. What effect does military turnover have on the effectiveness of this PWC? |
|-------------------------|--------------------------|
| A. Very positive        |
| B. Positive             |
| C. No effect either way |
| D. Negative             |
| E. Very negative        |
| F. Do not know |

What effect does military management have on vertical communications both up and down?

| OC 9. Perceptions of Military Management |
|-------------------------|--------------------------|
| A. Communications are improved greatly |
| B. Communications are improved to some extent |
| C. There is no effect on communications |
| D. Communications are hampered slightly |
| E. Communications are hampered greatly |
| F. Do not know |

| OC 10. In general, the opinion of military toward civilians is: |
|-------------------------|--------------------------|
| A. Very high            |
| B. High                 |
| C. Neutral              |
| D. Low                  |
| E. Very low             |

B-13
OC 11. In general, the opinion of civilians toward the military is:
A. Very high
B. High
C. Neutral
D. Low
E. Very low

OC 12. Overall, rate military management in terms of their ability to deal with personnel matters.
A. Very good
B. Good
C. Fair
D. Poor
E. Very poor
F. No opinion

OC 13. Overall, rate the military management in terms of their financial management skills.
A. Very good
B. Good
C. Fair
D. Poor
E. Very poor
F. No opinion

OC 14. To what extent do you see military management as being necessary for the successful operation of this PWC?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

OC 15. In general, most people who work for this PWC like to work overtime.
A. Almost always
B. Often
C. Sometimes
D. Rarely
E. Never

OC 16. In general, overtime is distributed fairly among employees.
A. Almost always
B. Often
C. Sometimes
D. Rarely
E. Never

OC 17. In general, rate your work center in terms of how well it does its job.
A. Very good
B. Good
C. Fair
D. Poor
E. Very poor

Rate your work center in terms of how well it does in the following areas: (Circle one letter on each line for your answer)

18. Productivity — amount and quality of work accomplished for money and time spent.
A B C D E

19. Responsiveness — ability of PWC to start and complete work quickly.
A B C D E

20. Adaptability — ability to meet changing conditions and demands.
A B C D E

21. Customer Satisfaction — extent to which customers are satisfied with PWC performance.
A B C D E
The following group of items deal with your feelings about life in general. Please CIRCLE the letter in front of the best answer for each item.

<table>
<thead>
<tr>
<th>Item</th>
<th>Options</th>
<th>1. Obedience and respect for authority</th>
<th>2. Working hard to improve the prestige and status of one's group</th>
<th>3. Getting recognition for one's achievements</th>
<th>4. Prestige. To become well-known to obtain recognition, awards or high social status</th>
<th>5. Wealth. To earn a great deal of money</th>
<th>6. Security. To achieve a secure and stable position in work and financial situation</th>
<th>7. Self-realization. To get the most from one's personal development</th>
<th>8. Duty. To dedicate oneself totally to ideals and principles</th>
<th>9. Pleasure. To enjoy life, to be happy and content, to have the good things in life</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A. Very important</td>
<td>B. Important</td>
<td>C. Somewhat important</td>
<td>D. Slightly important</td>
<td>E. Not at all important</td>
<td>A. Very important</td>
<td>B. Important</td>
<td>C. Somewhat important</td>
<td>D. Slightly important</td>
<td>E. Not at all important</td>
</tr>
</tbody>
</table>
From the following list, please WRITE in the space provided the four MOST IMPORTANT and four LEAST IMPORTANT things for a person to be.

**Most Important**

10. ______________________________________
11. ______________________________________
12. ______________________________________
13. ______________________________________

**Least Important**

14. ______________________________________
15. ______________________________________
16. ______________________________________
17. ______________________________________

Please CIRCLE the letter in front of the best answer to each question.

**MP 1.** Are you encouraged to participate in decisions that affect you? Flow of

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

**MP 2.** Some people are given special privileges.

A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

**MP 3.** When things go wrong it is the workers who are usually blamed.

A. Strongly agree
B. Agree
C. Not sure
D. Disagree
E. Strongly agree

**MP 4.** Information is withheld from workers even though it is readily available and could help.

A. Almost always
B. Often
C. Sometimes
D. Rarely
E. Never

**MP 5.** Good ideas don’t get communicated upward because top management is not very approachable.

A. Strongly agree
B. Agree
C. Not sure
D. Disagree
E. Strongly disagree

**MP 6.** How frequently are suggestions made to top management?

A. Very frequently
B. Frequently
C. Occasionally
D. Seldom
E. Almost never

**MP 7.** Suggestions made to top management receive fair evaluation.

A. Almost always
B. Often
C. Sometimes
D. Rarely
E. Never
MP 8. Management and supervisors set up interrelated jobs and work activities so that the work flows smoothly.
A. Strongly agree
B. Agree
C. Not sure
D. Disagree
E. Strongly disagree

MP 9. Workers are given direct orders by someone other than immediate supervisors.
A. Almost always
B. Often
C. Sometimes
D. Rarely
E. Never

MP 10. Management bypasses levels below them in assigning work.
A. Almost always
B. Often
C. Sometimes
D. Rarely
E. Never

MP 11. Top management is interested in ideas and suggestions from people at different levels in the organization.
A. Almost always
B. Often
C. Sometimes
D. Rarely
E. Never

MP 12. When problems are encountered those in authority make prompt decisions or recommendations.
A. Almost always
B. Often
C. Sometimes
D. Rarely
E. Never

MP 13. In general, how would you rate the customer’s understanding of how the PWC operates?
A. Very good
B. Good
C. Fair
D. Poor
E. Very poor
F. Do not know

MP 14. How often do job changes requested by customers cause unnecessary hardship on the efficiency of PWC?
A. Almost always
B. Often
C. Sometimes
D. Rarely
E. Never

MP 15. To what extent does management demand detailed information from people at lower levels?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

MP 16. Communications flow both up and down.
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all

MP 17. Written documents (such as budgets, schedules, project specifications, procedures, or program plans) are used as an important part of the job.
A. Strongly agree
B. Agree
C. Not sure
D. Disagree
E. Strongly disagree

MP 18. Performance appraisals are based on written performances standards or criteria.
A. Yes
B. No

MP 19. Standards of performance and control systems have been established in writing.
A. Yes
B. No
20. Supervisors are rewarded for helping their subordinates develop their skills and abilities.
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Not sure

22. To what extent could job changes initiated by the customer be avoided if:
   (Circle one letter on each line for your answer.)

23. Customers provided a better description of the work.
   A. Almost always
   B. Often
   C. Sometimes
   D. Rarely
   E. Never
   F. Don’t know

24. Customers didn’t change their minds so often.
   A. Almost always
   B. Often
   C. Sometimes
   D. Rarely
   E. Never
   F. Don’t know

25. Management would teach customers about the PWC operation.
   A. Almost always
   B. Often
   C. Sometimes
   D. Rarely
   E. Never
   F. Don’t know

26. There was better communication between customers and planning.
   A. Almost always
   B. Often
   C. Sometimes
   D. Rarely
   E. Never
   F. Don’t know

27. To what extent is the quality of work performed by contractors better than that of PWC?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. No opinion

28. To what extent are contractors evaluated on the same standards of performance as PWCs?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not know

29. To what extent has NAVFAC been helpful in the implementation of new systems and procedures?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not know
30. To what extent are PWC personnel involved in the development of systems and procedures implemented by NAVFAC?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all
F. Do not know

31. Contracting out jobs is more cost-effective than performing them in-house.
A. Strongly agree
B. Agree
C. Not sure
D. Disagree
E. Strongly disagree
F. Do not know

32. To what extent do contractors provide a quicker response time to customers than PWC?
A. To a very great extent
B. To a great extent
C. To some extent
D. To a small extent
E. Not at all
F. Do not know

Please answer the following three questions if you attend meetings that pertain to your work.

1. How productive are the meetings in terms of resolving problems?
   A. Very productive
   B. Somewhat productive
   C. Somewhat unproductive
   D. A total waste of time

2. Of the regular meetings you attend, list those that have value.

3. List those meetings that are not worth attending.

4. Are you able to obtain from other work centers the information you need in order to carry out your duties?
   A. Very often
   B. Often
   C. Sometimes
   D. Infrequently
   E. Never

5. In general, how would you characterize the relationship between the divisions within your code (department)?
   A. Excellent
   B. Very good
   C. Average
   D. Below average
   E. Very poor
6. To what extent do ACEs or SCEs (staff civils) provide useful information to the P&Es concerning new work?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

7. A description of the job to be done is generally provided to the P&Es by:
   A. ACEs or SCEs
   B. Customers
   C. Both

8. To what extent is productivity in your work group affected by other departments failure to communicate?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

To what extent are the following codes (departments) helpful to you in getting your work done? (CIRCLE the letter on each line for your answer.)

<table>
<thead>
<tr>
<th>Code</th>
<th>Department</th>
<th>Great deal</th>
<th>Good deal</th>
<th>Somewhat</th>
<th>Not at all</th>
<th>Not involved in my work</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Activity Civil Engineer Office</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>10</td>
<td>Management Office</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>11</td>
<td>Civilian Personnel Office</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>12</td>
<td>Comptroller Office</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>13</td>
<td>Housing Office</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>14</td>
<td>Engineering Department</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>15</td>
<td>Maintenance Control Department</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>16</td>
<td>Maintenance Department</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>17</td>
<td>Utilities Department</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>18</td>
<td>Transportation Department</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>19</td>
<td>Material Department</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>20</td>
<td>If you have difficulty working with another work center, name it and list the reasons.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B-20
21. How much information have you received on PMS procedures?
   A. A great deal
   B. Quite a bit
   C. Some
   D. A little
   E. None

22. How familiar are you with PMS?
   A. Very familiar
   B. Familiar
   C. Somewhat familiar
   D. Not very familiar
   E. Never heard of it

23. Do you think workers understand PMS?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not know

24. Planning of work
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not apply

25. Scheduling of work
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not apply

26. Coordinating various PWC functions
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not apply

27. Overall efficiency of work accomplishment
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Do not apply

28. In general, PMS has:
   A. Created more work than it has saved
   B. Saved work
   C. Had no effect on the amount of work
   D. Don't know

29. In general, the necessary information is provided so the reporting systems can operate effectively.
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Don't know

30. To what extent is pressure applied to avoid the use of overhead on jobs?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Don't know

31. To what extent do you think the reporting systems at this PWC accurately reflect what is actually taking place on the job?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Don't know
32. How often do you see employees at this PWC do things on the job that seem contrary to common sense, just to fulfill the requirements of a reporting system?
   A. Very frequently
   B. Frequently
   C. Occasionally
   D. Seldom
   E. Almost never

33. The actual time charged to a job reflects the actual hours worked on the job.
   A. Almost always
   B. Often
   C. Sometimes
   D. Rarely
   E. Almost never

34. List the reports by name or number that you deal with on your job. Indicate how useful they are by checking the appropriate category.

<table>
<thead>
<tr>
<th>Report</th>
<th>Useful the way it is modified</th>
<th>Should be eliminated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(A)</td>
<td>(B)</td>
</tr>
<tr>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

35. How often do P&Es plan and estimate jobs within their own trade?
   A. Very frequently
   B. Frequently
   C. Not sure
   D. Seldom
   E. Almost never

36. To what extent do P&Es know about the latest developments in their field?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
   F. Don't know

37. In general, P&Es are trained to do the work required of them.
   A. Strongly agree
   B. Agree
   C. Not sure
   D. Disagree
   E. Strongly disagree

38. Is the ratio of P&E hours to productive hours set by NAVFAC realistic?
   A. Yes
   B. No
   C. Not sure
Quite often there are changes in the job. To what extent is this a result of:

<table>
<thead>
<tr>
<th></th>
<th>To a very great extent (A)</th>
<th>To a great extent (B)</th>
<th>To some extent (C)</th>
<th>To a small extent (D)</th>
<th>Not at all (E)</th>
<th>Don’t know (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>39. A customer changing his mind</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>40. Poor planning and estimating</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>41. Poor job description from ACE</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>42. A fact of life due to the nature of rehabilitative construction work</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>43. Poor quality of work</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
</tbody>
</table>

Where do you think the job plan should be developed?
- In Planning and Estimating
- In the Maintenance Department
- Not sure

How often should a P&E go to the job site and see what needs to be done?
- Very frequently
- Frequently
- Not sure
- Seldom
- Almost never

How often do P&Es visit the job site?
- Very frequently
- Frequently
- Not sure
- Seldom
- Almost never

The P&Es do all they can to visit job sites but are too overworked and can’t get as many as they should.
- Strongly agree
- Agree
- Not sure
- Disagree
- Strongly disagree

How good is the communication between P&Es and the engineers?
- Excellent
- Very good
- Fair
- Poor
- Very poor
- Do not know

To what extent are the job plans helpful in getting the work done?
- To a very great extent
- To a great extent
- To some extent
- To a small extent
- Not at all
- Do not know

To what extent are the job schedules that are set up meet the work required?
- To a very great extent
- To a great extent
- To some extent
- To a small extent
- Not at all
- Not sure

Should the schedulers be located in the shops or centrally located?
- In the shops
- Centrally located
- No opinion
52. When people from the different departments work together to complete a job, the work activities are well planned.

A. Strongly agree  
B. Agree  
C. Not sure  
D. Disagree  
E. Strongly disagree

<table>
<thead>
<tr>
<th>A great deal</th>
<th>Quite a lot</th>
<th>Something</th>
<th>Little</th>
<th>Nothing</th>
</tr>
</thead>
</table>

How much do you as a supervisor have to say in making decisions about:

53. How you do your work  
54. Scheduling your work activities  
55. How to handle problems you face in your work  
56. Hiring of people  
57. Pay raises  
58. Firing people  
59. Promoting people  
60. When people take time off  
61. What you should do when something unexpected happens  
62. Settling disagreements

(CIRCLE one letter on each line for your answer.)

<table>
<thead>
<tr>
<th>A great extent</th>
<th>Quite a lot</th>
<th>Some</th>
<th>Little</th>
<th>Nothing</th>
</tr>
</thead>
</table>

How much say should you as a supervisor have in making decisions about:

63. How you do your work  
64. Scheduling your work activities  
65. How to handle problems you face in your work  
66. Hiring people  
67. Pay raises  
68. Firing people  
69. Promoting people  
70. When people take time off  
71. What you should do when something unexpected happens  
72. Settling disagreements

(CIRCLE one letter on each line for your answer.)

<table>
<thead>
<tr>
<th>A great extent</th>
<th>Quite a lot</th>
<th>Some</th>
<th>Little</th>
<th>Nothing</th>
</tr>
</thead>
</table>
73. To what extent are performance standards established for your subordinate's job?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

74. To what extent do performance ratings measure how well your subordinates do their job?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

75. In this PWC, to what extent are threats and punishments used as a way to get people to do better work?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

76. To what extent do workers participate in making important decisions related to their work?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

77. In this Center, people who make decisions have complete and accurate information.
   A. Always
   B. Many times
   C. Usually
   D. Sometimes
   E. Rarely

78. How much influence do the following groups or persons actually have on what happens in this Center?
   A. Navy managers
   B. Civilian managers
   C. Supervisors
   D. The workers

79. To what extent are job responsibilities carried out as defined by the position description?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all

80. To what extent are written communications emphasized?
   A. To a very great extent
   B. To a great extent
   C. To some extent
   D. To a small extent
   E. Not at all
<table>
<thead>
<tr>
<th>MP 84.</th>
<th>To what extent is the formal chain of command followed in decision making processes?</th>
<th>MP 86.</th>
<th>To what extent is going through proper channels required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Channels Followed</td>
<td>A. Almost always</td>
<td>A. To a very great extent</td>
<td></td>
</tr>
<tr>
<td>B. Often</td>
<td>B. To a great extent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Sometimes</td>
<td>C. To some extent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Seldom</td>
<td>D. To a small extent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Almost never</td>
<td>E. Not at all</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**85. There are standardized procedures for training supervisory personnel.**

| A. Strongly agree | MP 87. To what extent do even small matters have to be referred to someone higher up for a final decision? |
| B. Agree | A. To a very great extent |
| C. Not sure | B. To a great extent |
| D. Disagree | C. To some extent |
| E. Strongly disagree | D. To a small extent |
| | E. Not at all |

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