

# National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1981



U.S. Department of Labor  
Bureau of Labor Statistics  
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U.S. Department of Labor  
Raymond J. Donovan, Secretary  
Bureau of Labor Statistics  
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# Preface

This bulletin summarizes the results of the Bureau's annual salary survey of selected professional, administrative, technical, and clerical occupations in private industry. The nationwide salary information, relating to March 1981, is representative of establishments in a broad spectrum of industries throughout the United States, except Alaska and Hawaii.

Although only nationwide salary data are presented in this bulletin, salary data for clerical occupations and for two technical jobs—computer operator and drafter—are available for each metropolitan area in which the Bureau conducts area wage surveys. These area reports also include information on the incidence of employee benefits such as paid vacations, holidays, and health, insurance, and pension plans for nonsupervisory office workers.

In 1980, a survey of employee benefits in private industry covered the same scope as the national survey of professional, administrative, technical, and clerical pay. The findings of the survey appear in *Employee Benefits in Industry, 1980*, Bulletin 2107 (Bureau of Labor Statistics, 1981). Copies are for sale from the Government Printing Office or the Bureau's regional offices listed on the inside back cover of this bulletin.

The results of the national white-collar salary survey are used for a number of purposes, including general economic analysis and wage and salary administration by private and public employers. One important use is to provide the basis for setting Federal white-collar salaries under the provisions of the Federal Pay Comparability Act of 1970. Under this act, the President has designated the Secretary of Labor, the Director of the Office of Management and Budget, and the Director of the Office of Personnel Management to serve jointly as his agent to establish pay for Federal white-collar employees.

The President's agent is responsible for translating the survey findings into recommendations to the President on appropriate adjustments needed to make Federal pay rates comparable with those of private enterprise for the same levels of work. The agent also determines the industrial, geographic, establishment size, and occupational coverage of the survey.

The role of the Bureau of Labor Statistics in the pay-setting process is limited to conducting the survey and advising on the feasibility of proposed survey changes. It

should be emphasized that this survey, like any other salary survey, does not provide mechanical answers to pay policy questions.

The occupations studied span a wide range of duties and responsibilities. The occupations selected were judged to be (a) surveyable in industry within the framework of a broad survey design, (b) representative of occupational groups which are numerically important in industry as well as in the Federal Service, and (c) essentially of the same nature in both the Federal and private sectors.

Occupational definitions used to collect salary data (appendix C) reflect duties and responsibilities in private industry; however, they are also designed to be translatable to specific General Schedule (GS) grades applying to Federal employees. Thus, the definitions of some occupations and work levels were limited to specific elements that could be classified uniformly among establishments. The Bureau of Labor Statistics and the Office of Personnel Management worked jointly to prepare the definitions.

The survey could not have been conducted without the cooperation of the many firms whose salary data provide the basis for the statistical information in this bulletin. The Bureau, on its own behalf and on behalf of the other Federal agencies that contributed to survey planning, wishes to express appreciation for the cooperation it has received.

This survey was conducted in the Bureau's Office of Wages and Industrial Relations by the Division of Occupational Wage Structures. Philip M. Doyle prepared the analysis in this bulletin. Computer programming and tabulation of data were developed by Kay A. Wylie under the direction of Richard W. Maylott, Office of Statistical Operations. Terry Burdette and Alan Tupek, of the Office of Survey Design, were immediately responsible for the sampling design and other statistical procedures. Fieldwork and data collection for the survey were directed by the Bureau's Assistant Regional Commissioners for Operations. Material in this publication is in the public domain and may, with appropriate credit, be reproduced without permission.

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# Professional, Administrative, Technical, and Clerical Pay, March 1981

## Summary

Average salaries for most white-collar occupations covered by this survey rose sharply during the year ended March 1981.<sup>1</sup> The 1980-81 occupational increases typically fell in the 9- to 11-percent range compared with annual averages of 7 to 8 percent over the 1975-80 period and of 6 to 7 percent over the 1970-75 period.

Average monthly salaries for the 96 occupational levels varied from \$702 for clerks engaged in routine filing to \$5,580 for the highest level in the attorney series. For most of the occupations, salary levels in metropolitan areas and in large establishments were higher than the average for all establishments within the full scope of the survey. Salary levels and reported standard weekly hours in finance industries were generally lower than in other major industry divisions represented in the survey.

## Characteristics of the survey

This survey, the 22nd in an annual series, provides nationwide salary averages and distributions for 96 work level categories covering 23 occupations. It relates to establishments in all areas of the United States, except Alaska and Hawaii, in the following industries: Mining; construction; manufacturing; transportation, communications, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; and selected services. The minimum size of the establishments surveyed is either 50, 100, or 250 employees depending on the industry.<sup>2</sup>

Occupational definitions in this study permit employees to be classified by duties and responsibilities into appropriate work levels—designated by Roman numerals, with level "I" as the lowest. Specific job factors determining classification, however, vary from occupation to occupation, as do levels of difficulty and responsibility. Thus, Roman numeral designations do not necessarily identify equivalent levels of work among different occupations.<sup>3</sup>

The number of work levels in each occupation ranges from one for messengers to eight for engineers. Most occupations have more than one work level; some occupations are defined, however, to cover specific bands of levels which are not intended to represent all workers in those occupations. Thus, the survey is not designed to

permit comparisons of overall salary levels for occupations, such as accountants and auditors.

The survey design does yield separate presentation of data for metropolitan areas. These include the 276 Standard Metropolitan Statistical Areas in the United States, except Alaska and Hawaii, as defined through June 1977 by the U.S. Office of Management and Budget. Establishments in metropolitan areas employed slightly more than four-fifths of all workers and nine-tenths of the professional, administrative, clerical, and technical employees within the scope of the survey. Similarly, metropolitan areas accounted for nine-tenths of the employees in occupations for which salary data were developed. These occupations included more than 1,789,000 employees, or about one-sixth of the professional, administrative, technical, and clerical personnel in establishments covered by the survey.

## Employment

Occupational employment varied widely, reflecting not only actual differences among occupations, but also differences in the range of duties and responsibilities covered by occupational definitions. Among professional and administrative occupations, the eight levels of engineers included 478,800 employees, whereas two other occupational categories (chief accountants and job analysts) each included fewer than 2,500 employees. Accounting clerks and secretaries made up just over three-fifths of the 785,800 employees in the clerical occupations studied. Engineering technicians accounted for slightly over two-fifths of the 267,000 employees in the four technical support occupations studied; five levels each of drafters and of computer operators made up one-third and one-fourth, respectively, of the technical employment total. The newly surveyed occupation of

<sup>1</sup>Results of the March 1980 survey were presented in *National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1980*, Bulletin 2081 (Bureau of Labor Statistics, 1980).

<sup>2</sup>For a full description of the scope of the survey, see appendix A.

<sup>3</sup>In the survey coding structure, the level designations among various accounting jobs, for example, are not synonymous: Public accountants levels I through IV equate to levels II-V for accountants. Likewise, attorneys I equates to accountants III and public accountants II. For more information see appendix D.

photographer had 1,700 employees in three publishable work levels of five studied.

About one-half of the workers in the selected occupations were women.<sup>4</sup> The proportion of women varied significantly, however, among the 23 survey occupations. Women, for example, accounted for more than 96 percent of the clerical employees but for less than 3 percent of the chief accountants and engineers. Text table 1 shows occupational levels in which 5 percent or more of the incumbents were women. Salary levels for women were typically below those for men in the same occupation and level—generally by 10 percent or less. In nine occupational work levels, however, average salaries for women exceeded those of men.

### Changes in salary levels

Text table 2 presents increases in average salaries between annual survey periods since 1970 for occupations studied. Half of those occupations permitting comparisons over that time had record increases in 1980–81. The smallest increases were for job analysts at 7.6 percent and public accountants at 7.9 percent. Largest increases were recorded for stenographers, at 12.1 percent, and directors of personnel, at 11.4 percent.

To show changes in salaries since 1970 for different levels of work, occupational classifications were grouped into the three broad categories described in text table 3. Group A contains survey classifications which equate to grades 1–4 of the Federal Government's General Salary Schedule; group B covers GS grades 5–9; and group C, grades 11–15. (See appendix D, table D-1, for a listing of survey classifications that equate to each GS grade.) Average salaries increased more for higher occupational levels (group C) than for the two lower groups over the 1970–81 period.

### Average salaries, March 1981

Average monthly salaries for the occupations studied, (table 1) ranged from \$702 for file clerks I to \$5,580 for the top level of attorneys surveyed. These extremes reflect the wide range of duties and responsibilities represented by the work levels surveyed. Average salaries for workers in the various occupational levels and a brief indication of

<sup>4</sup> Whenever possible, data were collected for men and women separately. Bureau field representatives were unable to obtain data by sex for about 11 percent of the workers in the occupations studied.

**Text table 1. Occupational levels in which 5 percent or more of the incumbents were women**

Women (percent)	Occupation and level	Women (percent)	Occupation and level
95 or more	Accounting clerks I File clerks I and II Key entry operators I and II Personnel clerks I, II, and III Purchasing assistants I Secretaries I, II, III, IV, and V Stenographers I and II Typists I and II	25–29	Job analysts IV Auditors II Chemists II Drafters II
90–94	File clerks III Accounting clerks II and III Personnel clerks IV	20–24	Buyers II Directors of personnel I Auditors III Attorneys II Engineering technicians I Computer operators IV
80–84	Accounting clerks IV Job analysts II Purchasing assistants II	15–19	Accountants III Drafters III Engineering technicians II Computer operators V
75–79	Job analysts I	10–14	Accountants IV Attorneys III Directors of personnel II and IV Chemists III and IV Engineers I
65–69	Job analysts III Personnel clerks V	5–9	Auditors IV Attorneys IV Buyers III Directors of personnel III Engineers II Engineering technicians III Drafters IV Photographers II
50–54	Buyers I		
45–49	Accountants I Computer operators II Messengers Purchasing assistants III		
35–39	Auditors I Chemists I Computer operators I		
30–34	Accountants II Computer operators III Drafters I		

NOTE: Data for public accountants did not meet a publication standard that required sex data be available for at least 75 percent of the employment total in an occupational work level.

**Text table 2. Percent increases in average salaries by occupation, 1970-81<sup>1</sup>**

Occupation	1970 to 1971	1971 to 1972 <sup>2</sup>	1972 to 1973	1973 to 1974	1974 to 1975	1975 to 1976	1976 to 1977	1977 to 1978	1978 to 1979	1979 to 1980	1980 to 1981
<b>Professional, administrative, and technical support:</b>											
Accountants .....	6.7	5.6	4.9	6.1	9.8	6.4	7.8	8.3	8.0	9.2	10.0
Chief accountants .....	9.1	3.9	5.8	7.2	8.6	6.6	10.5	8.0	7.7	11.3	9.5
Public accountants .....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	4.2	7.9
Auditors .....	7.0	5.5	5.2	5.2	6.8	5.5	6.8	8.2	6.5	8.8	10.3
Job analysts .....	7.7	6.8	5.2	6.1	7.5	6.0	6.5	7.2	8.6	8.1	7.6
Directors of personnel .....	8.0	3.9	7.5	7.2	6.1	7.8	9.1	10.0	7.5	11.2	11.4
Attorneys .....	5.0	6.1	6.3	5.8	7.6	6.1	5.4	9.1	8.9	9.3	9.8
Buyers .....	7.0	6.3	5.0	6.0	9.2	6.7	7.0	7.8	7.0	8.1	9.8
Chemists .....	5.5	5.1	3.7	7.1	10.1	6.6	7.0	9.0	7.6	9.8	9.4
Engineers .....	5.7	5.2	5.1	5.4	8.4	6.8	6.4	9.0	8.4	9.8	10.9
Engineering technicians .....	6.5	5.1	4.7	6.0	9.0	8.1	7.2	7.1	7.6	11.0	10.2
Drafters .....	5.6	7.2	6.2	6.7	8.0	7.4	6.0	7.1	( <sup>4</sup> )	11.8	10.9
Computer operators .....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	5.4	8.5	7.2	8.3	( <sup>4</sup> )
<b>Clerical:</b>											
Accounting clerks .....	6.0	6.0	4.6	6.9	7.7	7.2	6.9	6.2	( <sup>4</sup> )	8.9	9.6
File clerks .....	6.1	5.5	5.9	5.4	9.6	6.4	5.5	9.7	5.5	9.3	8.0
Key entry operators .....	7.0	6.8	5.4	7.3	9.9	7.6	5.9	7.1	6.8	9.1	8.2
Messengers .....	6.7	6.3	5.1	5.6	10.1	7.4	7.5	6.0	6.8	5.5	9.7
Personnel clerks/assistants .....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	8.6	( <sup>3</sup> )
Secretaries .....	6.6	6.1	5.1	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	6.4	6.5	7.3	9.6	( <sup>4</sup> )
Stenographers .....	7.5	6.4	5.2	6.5	11.6	8.0	7.9	8.2	12.1	10.1	12.1
Typists .....	6.1	5.7	4.0	6.7	9.9	7.1	6.2	8.0	8.5	8.9	10.2

<sup>1</sup> For data on survey periods from 1961 to 1970, see *National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1979, Bulletin 2045* (Bureau of Labor Statistics, 1979), p. 3.

<sup>2</sup> Survey data did not represent a 12-month period due to change in survey timing. Data have been prorated to represent a 12-month interval.

<sup>3</sup> Not surveyed.

<sup>4</sup> Comparable data not available for both years.

NOTE: For method of computation, see appendix A.

the duties and responsibilities these levels represent are summarized in the following paragraphs.<sup>5</sup>

Average monthly salaries for *accountants* ranged from \$1,377 for beginning professionals (level I) to \$3,646 for specialists in complex accounting systems (level VI). At level III, the most heavily populated group, salaries averaged \$1,962 a month. Three-fifths of the accountants surveyed were in manufacturing industries; the public utilities, and the finance, insurance, and real estate groups each accounted for one-tenth.

**Text table 3. Percent increases in average salaries by work level category, 1970-81**

Period <sup>1</sup>	Group A (GS grades 1-4)	Group B (GS grades 5-9)	Group C (GS grades 11-15)
1970-81 .....	119.1	112.4	122.3
1970-71 .....	6.2	6.3	6.2
1971-72 <sup>2</sup> .....	6.3	5.2	5.6
1972-73 .....	5.5	4.4	5.7
1973-74 .....	6.2	5.7	6.2
1974-75 .....	9.1	8.6	8.8
1975-76 .....	7.6	6.4	6.5
1976-77 .....	6.9	6.3	7.7
1977-78 .....	7.5	8.0	8.8
1978-79 .....	7.2	7.5	8.0
1979-80 .....	9.1	10.1	9.3
1980-81 .....	9.8	9.6	10.2

<sup>1</sup> For data on survey periods from 1961 to 1970, see *National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1979, Bulletin 2045* (Bureau of Labor Statistics, 1979).

<sup>2</sup> Actual survey-to-survey increases have been prorated to a 12-month period.

NOTE: For method of computation, see appendix A. For detail on Federal General Schedule (GS) grades, see appendix D.

*Chief accountants*-surveyed separately from accountants-include those who develop or adapt and direct the accounting program for a company or an establishment (plant) of a company. Classification levels are determined by the extent of delegated authority and responsibility, the technical complexity of the accounting system, and, to a lesser degree, the size of the professional staff directed. Chief accountants at level I, who have authority to adapt the accounting system established at higher levels to meet the needs of an establishment with relatively few and stable functions and work processes (directing one or two accountants), averaged \$2,631 a month. Chief accountants IV,<sup>6</sup> who have authority to establish and maintain the accounting program, subject to general policy guidelines, for a company with numerous and varied functions and work processes (directing as many as 40 accountants), averaged \$4,668 a month. Almost three-fourths of the chief accountants who met the requirements of the definitions for these four levels were employed in manufacturing industries.

<sup>5</sup> Classification of employees in the occupations and work levels surveyed is based on factors detailed in the definitions in appendix C. Despite wide differences in the occupational pay levels reported by the survey, salary averages for jobs of equivalent levels of work often fall within relatively narrow bands. For example, monthly averages for the following work-level equivalents (Federal grade level 13) spanned 7 percent, or \$245: Accountant VI (\$3,646); chief accountant III (\$3,708); attorney IV (\$3,738); director of personnel III (\$3,574); chemist VI (\$3,493); and engineer VI (\$3,552).

<sup>6</sup> Data for chief accountants V, directors of personnel V, chemists VIII, computer operators VI, and photographers I and V, as defined in appendix C, did not meet publication criteria for this survey.

*Auditors* in the four levels defined for the survey had average salaries ranging from \$1,364 a month for auditors I, a trainee level, to \$2,456 for auditors IV, who conduct complex audits. Forty percent of the auditors were employed in manufacturing industries, 28 percent in finance, insurance, and real estate, and 17 percent in public utilities.

Among the four levels of *public accountants* surveyed, average monthly salaries ranged from \$1,344 for entry level employees, who are receiving practical experience in applying the principles, theories, and concepts of accounting and auditing to specific situations, (level I) to \$2,146 for public accountants who direct the field work for large or complex audits (level IV). This occupation was found only in public accounting firms which are part of the selected services industry group.

*Attorneys* are classified into survey levels based upon the difficulty of their assignments and their responsibilities. Attorneys I, who include new law graduates with bar membership and those performing work that is relatively uncomplicated due to clearly applicable precedents and well-established facts, averaged \$1,873 a month. Attorneys in the top level surveyed, level VI, averaged \$5,580 a month. These attorneys deal with legal matters of major importance to their organization (or corporation), and are usually subordinate only to the general counsel or an immediate deputy in very large firms. Finance, insurance, and real estate industries employed two-fifths of the attorneys, and manufacturing industries employed one-third.<sup>7</sup>

*Buyers* averaged \$1,350 a month at level I, which includes those who purchase "off-the-shelf" and readily available items and services from local sources. Buyers IV, who purchase large amounts of highly complex and technical items, materials, or services, averaged \$2,549 a month. Manufacturing industries employed 83 percent of the buyers in the four levels.

In the personnel management field, four work levels of *job analysts* and five levels of *directors of personnel* were studied. Job analysts I averaged \$1,412 compared with \$2,393 for job analysts IV, who, under general supervision, analyze and evaluate a variety of the more difficult jobs and who may participate in the development and installation of evaluation or compensation systems. Directors of personnel are limited by definition to those who have programs that include, at a minimum, responsibility for administering a job evaluation system, employment and placement functions, and employee relations and services functions. Those with significant responsibility for actual contract negotiation with labor unions as the principal company representative are excluded. The definition provides for various combinations of duties and responsibilities to determine the level. Among personnel directors, average monthly salaries ranged from \$2,321 for level I to \$4,493 for level IV.<sup>8</sup> Manufacturing industries employed 52 percent of the job analysts and 71 percent of the directors of personnel

included in the study; the finance, insurance, and real estate industries ranked next with 29 percent of the job analysts and 13 percent of the directors of personnel.

*Chemists and engineers* each are surveyed in eight levels.<sup>9</sup> Both series start with a professional trainee level, typically requiring a B.S. degree. The highest level surveyed involves either full responsibility over a very broad and highly complex and diversified engineering or chemical program, with several subordinates each directing large and important segments of the program; or individual research and consultation in problem areas where the chemist or engineer is a recognized authority and where solutions would represent a major scientific or technological advance.<sup>10</sup> Average monthly salaries ranged from \$1,508 for chemists I to \$4,070 for chemists VII, the highest level for which data could be presented, and from \$1,809 for engineers I to \$4,107 for engineers VII and \$4,736 for engineers VIII.

Level IV chemists and engineers, one of the largest groups in each profession and representing fully experienced employees, averaged \$2,567 and \$2,613 a month, respectively. Manufacturing industries accounted for 89 percent of the chemists and 73 percent of the engineers. Most of the remaining chemists were in research and development laboratories. Engineers were also found in significant numbers in establishments engaged in research and development, project design, and in public utilities.

The five-level series for *engineering technicians* is limited to employees providing semi-professional technical support to engineers engaged in areas such as research, design, development, testing, or manufacturing process improvement, and whose work pertains to electrical, electronic, or mechanical components or equipment. Technicians engaged primarily in production or maintenance work are excluded. Engineering technicians I, who perform simple routine tasks under close supervision, or from detailed procedures, averaged \$1,137 a month. Engineering technicians V, the highest level surveyed, averaged \$2,051 a month. That level includes fully experienced technicians performing more complex assignments involving responsibility for planning and conducting a complete project of relatively limited scope, or a portion of a larger and more diverse project in accordance with objectives, requirements, and design approaches as outlined by the supervisor or a professional engineer. Salaries for intermediate levels III and IV, at which a majority of the technicians surveyed are classified, averaged \$1,527 and \$1,803, respectively.

Most technicians were employed in manufacturing (76

<sup>7</sup> The survey excludes establishments primarily offering legal advice or legal services.

<sup>8</sup> See footnote 6.

<sup>9</sup> See footnote 6.

<sup>10</sup> It is recognized in the definition that top positions of some companies with unusually extensive and complex engineering or chemical programs are above that level.



percent) and in the selected services studied (16 percent), with public utilities employing nearly all the rest (4 percent). Although the ratio of such technicians to engineers studied was about 1 to 4 in all manufacturing industries, a ratio of approximately 1 to 3 was found in establishments manufacturing mechanical and electrical equipment, 1 to 2 in research, development, and testing laboratories, and 1 to 7 in public utilities.

Among the five levels of *drafters* surveyed, salaries ranged from \$923 a month for drafters I, who trace or copy finished drawings, to \$2,011 a month for drafters V, who work closely with design originators in preparing drawings of unusual, complex, or original designs. Drafters were distributed by industry in somewhat the same proportion as engineers, with 67 percent in manufacturing, 7 percent in public utilities, and 19 percent in the selected services.

*Computer operators* are classified on the basis of responsibility for solving problems and equipment malfunctions, the degree of variability of their assignments, and the relative level of sophistication of the equipment they operate. Computer operators I whose work assignments consist of on-the-job training averaged \$906 a month. Computer operators III, the largest of the group surveyed, averaged \$1,220. Computer operators V, the highest level for which data could be published, averaged \$1,733 a month.<sup>11</sup>

*Photographers* were surveyed for the first time in 1981. Average salaries ranged from \$1,425 a month at level II, which requires the use of standard still cameras to take photographs involving limited problems of speed, motion, contrast, or lighting to \$1,932 for level IV, which involves the use of special-purpose cameras and work under technically demanding conditions.<sup>12</sup> Manufacturing industries employed 67 percent of the photographers; selected services employed 14 percent.

Among the survey's 9 *clerical jobs*, secretary was the most heavily populated. Average monthly salaries for secretaries ranged from \$1,079 at level I to \$1,635 at level V. Average salaries of \$1,099 and \$1,311 were reported for stenographers I and II; and \$830 and \$1,030 for the two levels of typists. Generally, average salaries for clerical workers were highest in the public utilities, manufacturing, and mining industries and lowest in the finance, insurance, and real estate, and retail trade divisions. Manufacturing industries employed 42 percent of the clerical employees classified in survey occupations. The finance, insurance, and real estate industries and public utilities also accounted for large numbers of clerical workers, employing 24 and 11 percent of the total, respectively.

Average monthly salaries for *accounting clerks* ranged from \$798 for those performing very simple and routine clerical accounting operations (level I) to \$1,407 for employees who maintain journals or subsidiary ledgers of an accounting system (level IV). Almost three-fourths of the accounting clerks were classified in levels II and III,

for which average salaries were \$953 and \$1,121 a month, respectively.

Five levels of *personnel clerks (employment)* were surveyed. Salaries ranged from \$898 a month for clerks performing routine tasks while receiving training and gaining experience (level I) to \$1,673 a month for clerks providing technical support in processing a variety of complicated personnel actions (level V). Nearly two-fifths of the classified personnel clerks were at level II, in which employees process a variety of personnel documents, selecting the most appropriate precedent, rule, or procedure. They averaged \$1,058 a month.

Data for three levels of *purchasing assistants*, who provide clerical or technical support to buyers, were published for the first time in 1981. Level I assistants, who examine and review routine purchasing documents, averaged \$1,002 a month, while level III assistants, who prepare purchase documents, expedite the purchase of highly specialized items, or provide technical support requiring detailed knowledge of company procedures, averaged \$1,641 a month.

In 22 of the 27 clerical work levels, employment in manufacturing exceeded that in any of the nonmanufacturing divisions within the scope of the survey; highest employment totals in the other 5 work levels were in the finance, insurance, and real estate division. Women constituted 95 percent or more of the employees in 18 of the clerical work levels.

### Salary levels in metropolitan areas

For most occupational levels, average salaries in metropolitan areas (table 2) were slightly higher than national averages (table 1). In only 10 instances, however, did these differences exceed 1.0 percent; only one exceeded 2.0 percent.

About nine-tenths of the employment in survey occupations was in metropolitan areas. The proportions varied, however, among occupations and work levels. More than 95 percent of the attorneys, auditors, job analysts, messengers, and public accountants were employed in metropolitan areas. In 62 of the 96 work levels, 90 percent or more of the workers were in metropolitan areas. It is apparent, therefore, that for most work levels, salaries in nonmetropolitan counties could have little effect upon the averages for all establishments combined.

### Salary levels in large establishments

Table 3 presents separate data for 83 occupational work levels in large establishments (those employing 2,500 workers or more). Included are the proportions of employees working in large establishments and their salary levels relative to the full survey averages.

Large establishments accounted for 37 percent of all employees in the 83 occupational levels—ranging from 10

<sup>11</sup>See footnote 6.

<sup>12</sup>See footnote 6.

percent of file clerks I to 74 percent for photographers IV. Large establishments generally employed a majority of the workers at the highest levels of professional, administrative, and technical support occupations. They employed most workers at only three clerical levels—purchasing assistant III and both levels of stenographers.

Salary levels in large establishments expressed as percents of levels in all establishments, combined, ranged from 96 to 121. Salary levels in large establishments exceeded all-establishment averages by 5 percent or more in all but one of the clerical levels, but in only 31 of 59 nonclerical levels, as shown by the following tabulation (all-establishment average for each occupational level = 100 percent):

Total number of levels	<i>Professional, administrative, and technical</i>		<i>Clerical</i>
	59	24	
95-99 percent .....	2	—	—
100-104 percent .....	26	1	—
105-109 percent .....	20	10	—
110-114 percent .....	10	8	—
115 percent and over .....	1	5	—

As expected, the pay relatives were close to 100 for those work levels where large establishments contributed heavily to the total employment and, consequently, to the all-establishment average.

### Salary distributions

Percent distributions of employees by monthly salary are presented for the professional and administrative occupations in table 4, for technical support occupations in table 5, and for the clerical occupations in table 6. Within most work levels, salary rates for the highest paid

employees were more than twice those of the lowest paid employees. The absolute spread between highest and lowest paid workers within a given work level tended to widen with each rise in work level for most occupations. Individual salaries often overlapped substantially among work levels of a given occupation. (Also, salary ranges for established pay grades or work levels within individual firms also often overlapped substantially.)

Median monthly salaries (the amount below and above which 50 percent of the employees are found) for most work levels were slightly lower than the weighted averages (means) cited earlier, (that is, salaries in the upper halves of the arrays affected averages more than salaries in the lower halves). The relative difference between the mean and the median was less than 2 percent for 37 of the 96 work levels, from 2 to 4 percent in 36 work levels, and from 4 to slightly under 7.5 percent in the other 23 levels.

Charts 1 and 2 give the middle 50 and 80 percent of the salary range, and the median salary for each occupational work level. The charts point up occupational pay relationships as well as the typically greater degree of salary dispersion associated with the higher work levels in each occupational series.

Expressing the salary range of the middle 50 percent of employees in each work level as a percent of the median salary permits comparison of salary ranges and eliminates extremely low and high salaries from each comparison. As shown in text table 4, the degree of dispersion ranged from 15 to 30 percent of the median salary in 83 of the 96 work levels. The degree of dispersion tended to be greater in clerical occupations than in other occupations studied.

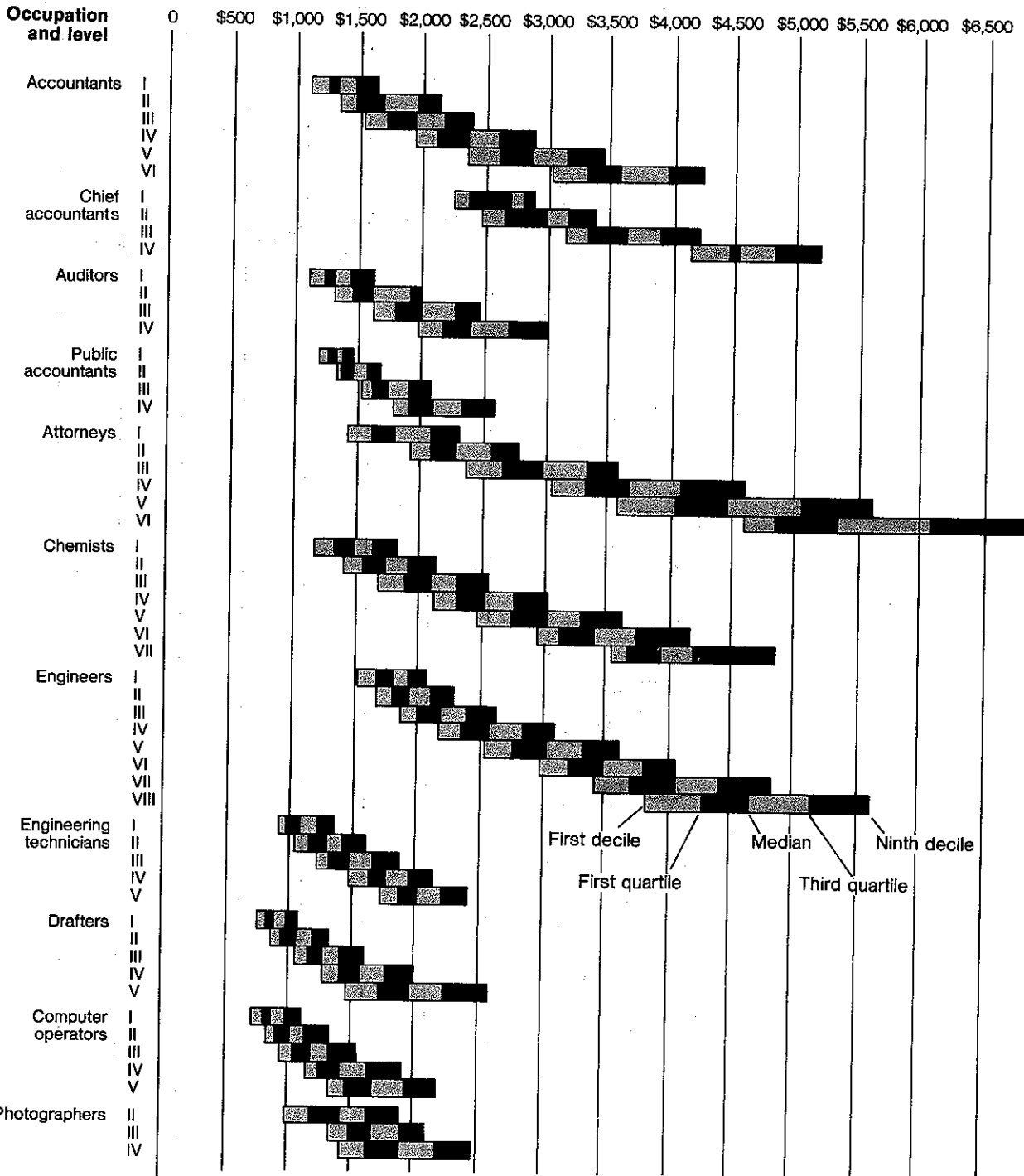
Differences in salaries within work levels reflect a variety of factors other than duties and responsibilities. These include salary structures within establishments which provide for a range of rates for each grade level;

**Text table 4. Distribution of work levels by degree of salary dispersion**

Occupation	Number of work levels	Number of levels having degree of dispersion <sup>1</sup> of—				
		Under 15 percent	15 and under 20 percent	20 and under 25 percent	25 and under 30 percent	30 percent and over
		All occupations .....	96	7	25	37
Accountants .....	6	—	2	4	—	—
Chief accountants .....	4	2	2	—	—	—
Public accountants .....	4	2	2	—	—	—
Auditors .....	4	—	1	3	—	—
Job analysts .....	4	1	2	1	—	—
Directors of personnel .....	4	—	1	1	2	—
Attorneys .....	6	—	—	5	1	—
Buyers .....	4	—	—	4	—	—
Chemists .....	7	1	4	2	—	—
Engineers .....	8	1	7	—	—	—
Engineering technicians .....	5	—	2	3	—	—
Drafters .....	5	—	1	3	1	—
Computer operators .....	5	—	—	2	3	—
Photographers .....	3	—	—	1	1	1
Clerical workers .....	27	—	1	8	13	5

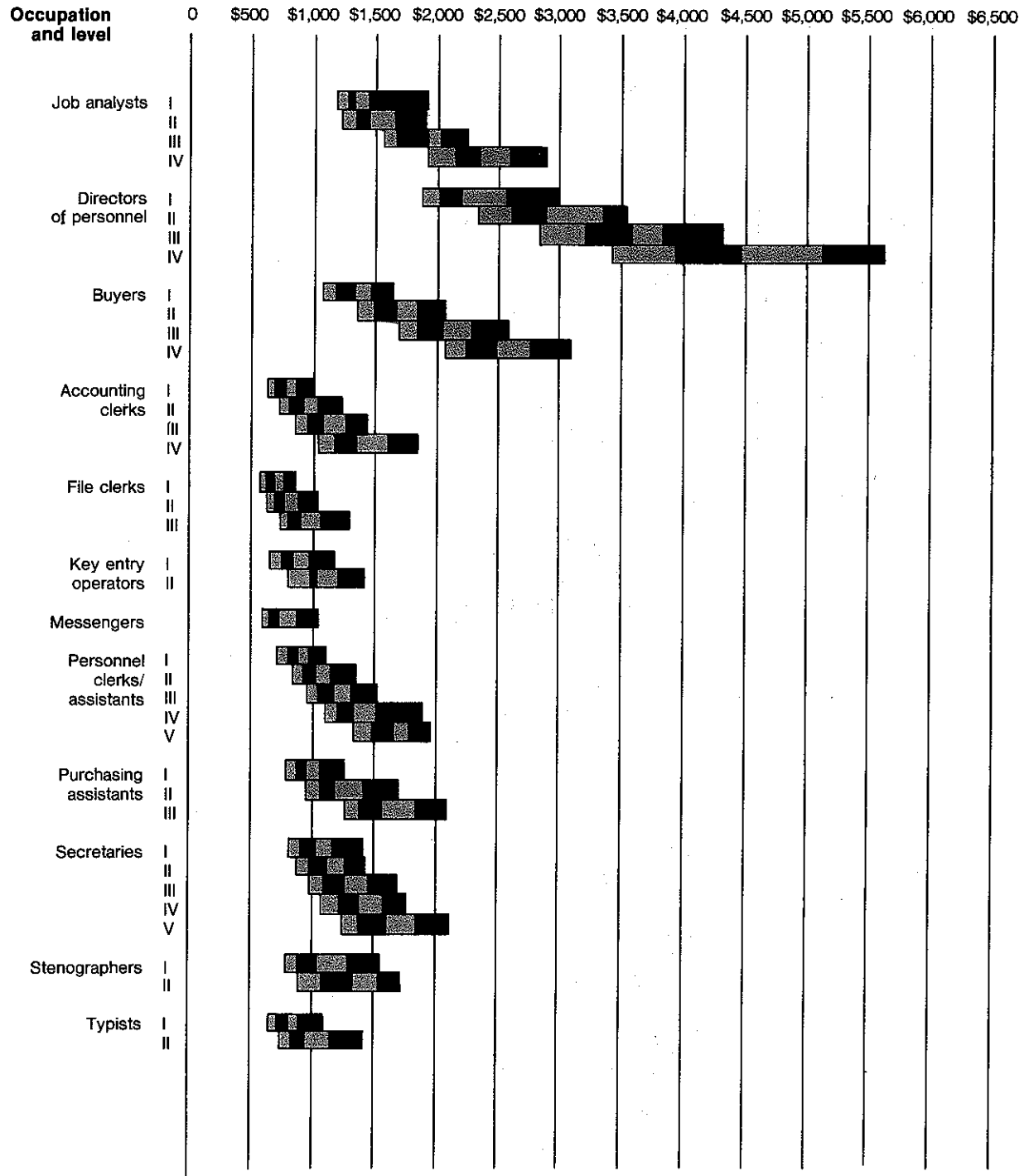
<sup>1</sup> Degree of dispersion equals the salary range of the middle 50 percent of employees in a work level expressed as a percent of the median salary for that level.

**Chart 1. Salaries in professional and technical occupations, March 1981**  
 Median monthly salaries and ranges within which fell 50 percent and 80 percent of employees



### Chart 2. Salaries in administrative and clerical occupations, March 1981

Median monthly salaries and ranges within which fell 50 percent and 80 percent of employees



variations in occupational employment among industries, as illustrated in table 7 and chart 3; and salary variations among regions, particularly for clerical occupations.<sup>13</sup> Clerical employees usually are recruited locally while professional and administrative positions tend to be recruited on a broader regional or national basis.

### **Pay differences by industry**

By combining the data for all levels of work studied in each occupation, relative salary levels in major industry divisions may be compared to each other and to salary levels in all industries combined (table 8).

Relative salary levels for the professional, administrative, and technical support occupations in manufacturing industries tended to be closest to the average for all industry divisions. However, manufacturing contributed more to total employment than any other industry division for all but two (attorneys and public accountants) of the 14 occupations. Relative salary levels in the mining and public utilities industry divisions were generally the highest.

For most occupations studied, relative salary levels were lower in retail trade and in finance, insurance, and real estate than in other industry divisions. Where retail trade and the finance industries contributed a substantial proportion of the total employment in an occupation, the average salary for all industries combined was lower, and the relative levels in industries such as manufacturing and public utilities tended to be higher than the all-industry level. For example, relative pay levels for file clerks (113 percent of the all-industry level in

manufacturing and 123 percent in public utilities) reflected the influence of lower salaries for the high proportion (65 percent) of these workers employed in the finance industries. The finance industries, however, also reported slightly shorter average standard workweeks than other industries surveyed, as shown in table 9.

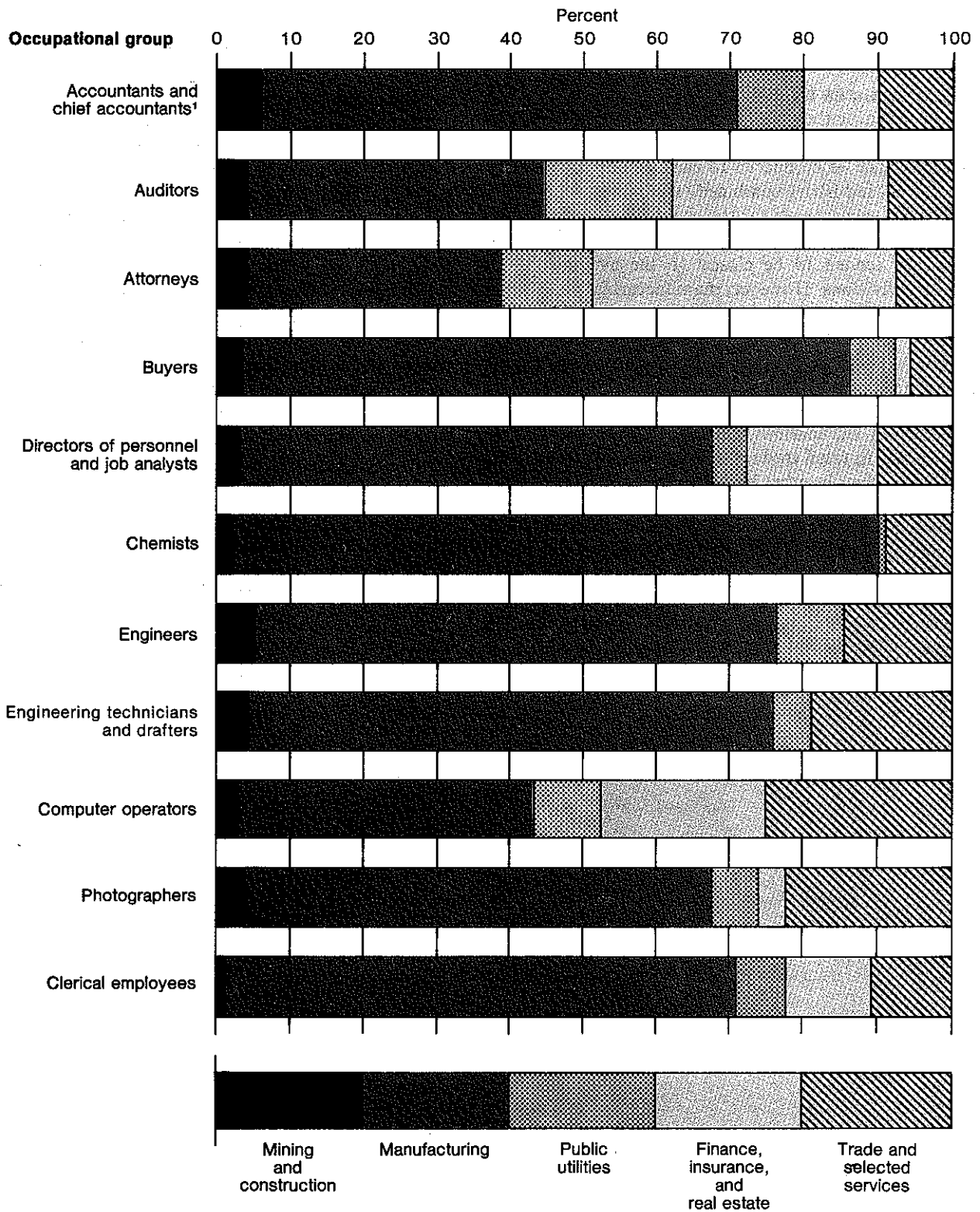
### **Average standard weekly hours**

The length of the standard workweek, on which the regular straight-time salary is based, was obtained for individual employees in occupations studied. When individual weekly hours were not available, particularly for some higher level professional and administrative positions, the predominant workweek of the office work force was used as the standard workweek. The distribution of average weekly hours (rounded to the nearest half hour) is presented in table 9 for each occupation by major industry division surveyed. Average weekly hours were lower in finance, insurance, and real estate (38 hours in most occupations) than in the other industry divisions (39 or 40 hours). Average weekly hours have been stable over the past decade.<sup>14</sup>

<sup>13</sup> For analysis of interarea pay differentials in clerical salaries, see *Area Wage Surveys: Metropolitan Areas, United States and Regional Summaries, 1977*, Bulletin 1950-77. (Bureau of Labor Statistics, 1980) and *Wage Differences Among Metropolitan Areas, 1979*, Summary 80-11 (Bureau of Labor Statistics, 1979).

<sup>14</sup> For information on scheduled weekly hours of office workers employed in metropolitan areas, see *Area Wage Surveys, Selected Metropolitan Areas, 1978*, Bulletin 2025-76 (Bureau of Labor Statistics, 1981).

**Chart 3. Relative employment in selected occupational groups by industry division, March 1981**



<sup>1</sup>Public accountants are not included. This occupation is found only in accounting, auditing, and bookkeeping services in the selected services industry group.

**Table 1. Average salaries: United States**

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry,<sup>1</sup> United States, except Alaska and Hawaii, March 1981)

OCCUPATION AND LEVEL <sup>2</sup> /	NUMBER OF EMPLOYEES <sup>3</sup> /	MONTHLY SALARIES <sup>4</sup> /				ANNUAL SALARIES <sup>5</sup> /			
		MEAN	MEDIAN	MIDDLE RANGES <sup>6</sup> /		MEAN	MEDIAN	MIDDLE RANGES <sup>6</sup> /	
				FIRST QUARTILE	THIRD QUARTILE			FIRST QUARTILE	THIRD QUARTILE
<b>ACCOUNTANTS AND AUDITORS</b>									
ACCOUNTANTS I.....	13,290	\$1,377	\$1,350	\$1,250	\$1,497	\$16,529	\$16,200	\$14,994	\$17,964
ACCOUNTANTS II.....	21,975	1,679	1,618	1,466	1,849	20,153	19,412	17,593	22,191
ACCOUNTANTS III.....	34,450	1,962	1,925	1,730	2,156	23,545	23,098	20,750	25,990
ACCOUNTANTS IV.....	21,326	2,402	2,360	2,130	2,625	28,819	28,320	25,560	31,500
ACCOUNTANTS V.....	8,488	2,928	2,915	2,610	3,200	35,141	34,980	31,320	33,300
ACCOUNTANTS VI.....	1,539	3,646	3,590	3,332	3,958	43,754	43,083	39,984	47,496
CHIEF ACCOUNTANTS I.....	680	2,631	2,707	2,385	2,818	31,576	32,487	28,620	33,816
CHIEF ACCOUNTANTS II.....	938	2,963	2,999	2,666	3,200	35,560	35,986	31,987	38,000
CHIEF ACCOUNTANTS III.....	672	3,708	3,643	3,415	3,917	44,894	43,716	40,984	47,004
CHIEF ACCOUNTANTS IV.....	163	4,668	4,525	4,482	4,848	56,316	54,300	53,778	58,177
AUDITORS I.....	1,849	1,364	1,333	1,250	1,458	16,369	15,996	14,994	17,493
AUDITORS II.....	3,251	1,651	1,624	1,469	1,833	19,814	19,492	17,633	21,991
AUDITORS III.....	4,313	2,033	2,000	1,812	2,249	24,401	24,000	21,741	25,988
AUDITORS IV.....	2,649	2,456	2,391	2,173	2,701	29,475	28,689	26,070	32,417
PUBLIC ACCOUNTANTS I.....	8,443	1,344	1,333	1,275	1,399	15,130	15,996	15,300	16,793
PUBLIC ACCOUNTANTS II.....	8,721	1,500	1,483	1,400	1,583	18,000	17,793	16,000	18,992
PUBLIC ACCOUNTANTS III.....	7,868	1,786	1,749	1,617	1,916	21,426	20,992	19,404	22,991
PUBLIC ACCOUNTANTS IV.....	3,875	2,146	2,100	1,916	2,332	25,748	25,200	22,991	27,989
<b>PERSONNEL MANAGEMENT</b>									
JOB ANALYSTS I.....	181	1,412	1,320	1,274	1,445	16,940	15,840	15,294	17,340
JOB ANALYSTS II.....	424	1,525	1,459	1,333	1,675	18,296	17,513	15,995	20,100
JOB ANALYSTS III.....	666	1,900	1,837	1,656	2,026	22,799	22,341	19,992	24,312
JOB ANALYSTS IV.....	448	2,393	2,345	2,152	2,607	28,718	28,140	25,824	31,284
DIRECTORS OF PERSONNEL I.....	1,267	2,321	2,200	2,005	2,582	27,848	26,400	24,062	30,989
DIRECTORS OF PERSONNEL II.....	2,053	2,933	2,889	2,625	3,327	35,193	34,666	31,500	33,924
DIRECTORS OF PERSONNEL III.....	812	3,574	3,574	3,215	3,843	42,390	42,883	38,580	46,112
DIRECTORS OF PERSONNEL IV.....	352	4,493	4,475	3,928	5,125	53,914	53,700	47,135	61,500
<b>ATTORNEYS</b>									
ATTORNEYS I.....	1,586	1,873	1,803	1,633	2,083	22,477	21,638	19,592	25,000
ATTORNEYS II.....	2,410	2,338	2,291	2,100	2,574	28,359	27,489	25,200	30,888
ATTORNEYS III.....	3,135	3,031	2,999	2,656	3,332	36,373	35,986	31,992	39,984
ATTORNEYS IV.....	2,535	3,738	3,685	3,332	4,088	44,853	44,220	39,984	49,056
ATTORNEYS V.....	1,587	4,566	4,475	4,025	5,050	54,792	53,700	48,300	60,500
ATTORNEYS VI.....	666	5,580	5,329	4,833	6,084	66,958	63,948	57,996	73,008
<b>BUYERS</b>									
BUYERS I.....	6,664	1,350	1,320	1,177	1,476	16,202	15,840	14,119	17,717
BUYERS II.....	19,057	1,689	1,651	1,499	1,836	20,256	19,813	17,933	22,033
BUYERS III.....	17,235	2,100	2,058	1,842	2,290	25,196	24,690	22,107	27,480
BUYERS IV.....	5,539	2,549	2,491	2,239	2,798	30,583	29,887	26,868	33,578
<b>CHEMISTS AND ENGINEERS</b>									
CHEMISTS I.....	3,491	1,508	1,499	1,354	1,638	18,092	17,993	16,244	19,555
CHEMISTS II.....	6,131	1,757	1,724	1,550	1,924	21,089	20,692	18,723	23,091
CHEMISTS III.....	11,686	2,120	2,095	1,930	2,327	25,438	25,140	22,800	27,924
CHEMISTS IV.....	11,221	2,567	2,550	2,315	2,776	30,801	30,600	27,780	33,312
CHEMISTS V.....	8,708	3,055	3,030	2,741	3,315	36,563	36,365	32,887	39,784
CHEMISTS VI.....	3,788	3,493	3,400	3,143	3,754	41,911	40,800	37,716	45,050
CHEMISTS VII.....	1,622	4,070	3,941	3,660	4,219	48,845	47,286	43,920	50,628
ENGINEERS I.....	28,233	1,809	1,808	1,684	1,925	21,712	21,691	20,204	23,100
ENGINEERS II.....	48,312	1,972	1,950	1,809	2,116	23,563	23,400	21,708	25,390
ENGINEERS III.....	108,063	2,229	2,199	2,010	2,415	26,746	26,389	24,120	28,980
ENGINEERS IV.....	134,180	2,613	2,585	2,360	2,845	31,352	31,023	28,320	34,140
ENGINEERS V.....	97,379	3,060	3,033	2,766	3,333	36,725	36,394	33,192	39,995
ENGINEERS VI.....	45,433	3,552	3,500	3,220	3,824	42,622	42,000	38,640	45,883
ENGINEERS VII.....	14,450	4,107	4,065	3,710	4,420	49,287	48,780	44,520	53,040
ENGINEERS VIII.....	2,785	4,736	4,658	4,280	5,141	56,828	55,900	51,350	61,592

See footnotes at end of table.

**Table 1. Continued—Average salaries: United States**

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry,<sup>1</sup> United States, except Alaska and Hawaii, March 1981)

OCCUPATION AND LEVEL <sup>2/</sup>	NUMBER OF EMPLOYEES <sup>3/</sup>	MONTHLY SALARIES <sup>4/</sup>				ANNUAL SALARIES <sup>4/</sup>			
		MEAN	MEDIAN	MIDDLE RANGES <sup>5/</sup>		MEAN	MEDIAN	MIDDLE RANGES <sup>5/</sup>	
				FIRST QUARTILE	THIRD QUARTILE			FIRST QUARTILE	THIRD QUARTILE
<b>TECHNICAL SUPPORT</b>									
ENGINEERING TECHNICIANS I.....	5,898	\$1,137	\$1,100	\$991	\$1,239	\$13,644	\$13,203	\$11,888	\$14,868
ENGINEERING TECHNICIANS II.....	18,803	1,307	1,291	1,156	1,423	15,679	15,494	13,869	17,081
ENGINEERING TECHNICIANS III.....	31,017	1,527	1,483	1,338	1,675	18,326	17,790	16,059	20,100
ENGINEERING TECHNICIANS IV.....	35,540	1,803	1,770	1,623	1,963	21,530	21,240	19,474	23,556
ENGINEERING TECHNICIANS V.....	19,056	2,051	2,023	1,865	2,220	24,539	24,276	22,332	26,640
DRAPERS I.....	2,854	923	888	825	978	11,082	10,656	9,900	11,732
DRAPERS II.....	12,494	1,075	1,050	950	1,178	12,900	12,600	11,430	14,136
DRAPERS III.....	24,399	1,301	1,270	1,150	1,425	15,512	15,246	13,830	17,100
DRAPERS IV.....	26,580	1,611	1,575	1,415	1,777	19,336	18,903	16,977	21,325
DRAPERS V.....	20,034	2,011	1,968	1,725	2,238	24,129	23,619	20,700	26,356
COMPUTER OPERATORS I.....	6,135	906	882	801	991	10,869	10,584	9,615	11,332
COMPUTER OPERATORS II.....	12,849	1,049	1,004	912	1,138	12,586	12,044	10,949	13,661
COMPUTER OPERATORS III.....	29,299	1,220	1,180	1,041	1,340	14,545	14,163	12,495	16,080
COMPUTER OPERATORS IV.....	16,671	1,475	1,425	1,250	1,624	17,704	17,102	15,120	19,432
COMPUTER OPERATORS V.....	3,545	1,733	1,680	1,468	1,929	20,796	20,160	17,612	23,150
PHOTOGRAPHERS II.....	528	1,425	1,430	1,191	1,641	17,396	17,156	14,286	19,692
PHOTOGRAPHERS III.....	698	1,704	1,682	1,521	1,902	20,444	20,184	18,249	22,924
PHOTOGRAPHERS IV.....	450	1,932	1,912	1,654	2,182	23,187	22,942	19,844	25,130
<b>CLERICAL</b>									
ACCOUNTING CLERKS I.....	30,466	798	760	685	852	9,575	9,125	8,218	10,219
ACCOUNTING CLERKS II.....	86,720	953	912	802	1,038	11,431	10,949	9,624	12,456
ACCOUNTING CLERKS III.....	59,797	1,121	1,080	950	1,250	13,454	12,960	11,395	14,394
ACCOUNTING CLERKS IV.....	23,179	1,407	1,351	1,178	1,609	16,886	16,216	14,138	19,308
FILE CLERKS I.....	27,925	702	670	608	760	8,423	8,040	7,300	9,120
FILE CLERKS II.....	11,773	820	760	691	870	9,836	9,120	8,290	10,440
FILE CLERKS III.....	3,833	974	910	801	1,070	11,691	10,916	9,615	12,340
KEY ENTRY OPERATORS I.....	68,883	886	841	740	975	10,633	10,089	8,875	11,700
KEY ENTRY OPERATORS II.....	41,251	1,079	1,025	895	1,204	12,353	12,305	10,741	14,443
MESSENGERS.....	15,609	783	730	652	856	9,395	8,760	7,821	10,272
PERSONNEL CLERKS/ASSISTANTS I.....	2,556	898	869	782	965	10,777	10,428	9,385	11,580
PERSONNEL CLERKS/ASSISTANTS II.....	5,096	1,058	1,002	910	1,147	12,696	12,020	10,920	13,765
PERSONNEL CLERKS/ASSISTANTS III.....	3,999	1,192	1,159	1,040	1,304	14,303	13,911	12,480	15,842
PERSONNEL CLERKS/ASSISTANTS IV.....	1,866	1,400	1,317	1,200	1,504	16,794	15,798	14,430	18,043
PERSONNEL CLERKS/ASSISTANTS V.....	416	1,673	1,650	1,499	1,797	20,079	19,800	17,993	21,563
PURCHASING ASSISTANTS I.....	5,135	1,002	961	869	1,081	12,025	11,533	10,428	12,372
PURCHASING ASSISTANTS II.....	4,322	1,274	1,200	1,069	1,421	15,287	14,400	12,825	17,350
PURCHASING ASSISTANTS III.....	1,904	1,641	1,554	1,385	1,830	19,688	18,643	16,622	21,961
SECRETARIES I.....	63,923	1,079	1,025	900	1,176	12,947	12,330	10,800	14,112
SECRETARIES II.....	61,171	1,147	1,125	993	1,279	13,769	13,495	11,914	15,344
SECRETARIES III.....	106,881	1,298	1,253	1,096	1,443	15,576	15,332	13,153	17,310
SECRETARIES IV.....	43,624	1,406	1,390	1,208	1,583	16,872	16,680	14,495	18,392
SECRETARIES V.....	23,515	1,635	1,599	1,390	1,850	19,615	19,192	16,685	22,200
STENOGRAPHERS I.....	17,422	1,099	1,043	878	1,293	13,191	12,514	10,532	15,512
STENOGRAPHERS II.....	14,725	1,311	1,320	1,079	1,525	15,727	15,840	12,942	18,301
TYPISTS I.....	38,236	830	780	700	895	9,959	9,356	8,395	10,740
TYPISTS II.....	21,551	1,030	956	829	1,158	12,358	11,471	9,948	13,895

<sup>1</sup> For scope of study, see table A-1 in appendix A.

<sup>2</sup> Occupational definitions appear in appendix C.

<sup>3</sup> Occupational employment estimates relate to the total in all establishments within the scope of the survey and not to the number actually surveyed. For further explanation, see appendix A.

<sup>4</sup> Salaries reported are standard salaries paid for standard work schedules; i.e., the straight-

time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.

<sup>5</sup> The middle range (interquartile) is the central part of the array excluding the upper and lower fourths of the employee distribution.



**Table 2. Average salaries: Metropolitan areas**

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, metropolitan areas,<sup>1</sup> United States, except Alaska and Hawaii, March 1981)

OCCUPATION AND LEVEL <sup>2</sup> /	NUMBER OF EMPLOYEES <sup>3</sup> /	MONTHLY SALARIES <sup>4</sup> /				ANNUAL SALARIES <sup>5</sup> /			
		MEAN	MEDIAN	MIDDLE RANGES <sup>6</sup> /		MEAN	MEDIAN	MIDDLE RANGES <sup>6</sup> /	
				FIRST QUANTILE	THIRD QUANTILE			FIRST QUANTILE	THIRD QUANTILE
<b>ACCOUNTANTS AND AUDITORS</b>									
ACCOUNTANTS I.....	11,971	\$1,384	\$1,350	\$1,250	\$1,499	\$16,608	\$16,200	\$14,994	\$17,393
ACCOUNTANTS II.....	19,178	1,692	1,629	1,477	1,869	20,306	19,553	17,720	22,432
ACCOUNTANTS III.....	30,063	1,970	1,940	1,733	2,177	23,644	23,280	20,792	26,122
ACCOUNTANTS IV.....	18,885	2,405	2,365	2,125	2,643	28,863	28,380	25,500	31,711
ACCOUNTANTS V.....	7,601	2,936	2,916	2,620	3,207	35,231	34,986	31,440	38,479
ACCOUNTANTS VI.....	1,468	3,656	3,590	3,332	3,958	43,875	43,084	39,984	47,496
CHIEF ACCOUNTANTS I.....	495	2,617	2,707	2,342	2,765	31,435	32,487	28,104	33,180
CHIEF ACCOUNTANTS II.....	768	2,974	3,000	2,642	3,249	35,693	36,001	31,699	39,986
CHIEF ACCOUNTANTS III.....	623	3,707	3,643	3,415	3,917	44,479	43,716	40,984	47,304
CHIEF ACCOUNTANTS IV.....	163	4,668	4,525	4,405	4,848	56,016	54,300	52,855	58,177
AUDITORS I.....	1,821	1,364	1,333	1,250	1,458	13,368	15,996	14,994	17,493
AUDITORS II.....	3,125	1,651	1,624	1,461	1,833	19,816	19,492	17,531	21,991
AUDITORS III.....	4,069	2,034	2,000	1,796	2,249	24,412	24,000	21,551	26,988
AUDITORS IV.....	2,559	2,457	2,398	2,179	2,704	29,483	28,776	26,153	32,445
PUBLIC ACCOUNTANTS I.....	8,353	1,346	1,333	1,291	1,399	16,157	15,996	15,494	16,793
PUBLIC ACCOUNTANTS II.....	8,611	1,501	1,483	1,413	1,583	18,017	17,793	16,958	18,392
PUBLIC ACCOUNTANTS III.....	7,798	1,787	1,749	1,625	1,916	21,443	20,992	19,497	22,331
PUBLIC ACCOUNTANTS IV.....	3,775	2,140	2,100	1,905	2,325	25,686	25,203	22,859	27,901
<b>PERSONNEL MANAGEMENT</b>									
JOB ANALYSTS I.....	179	1,411	1,302	1,255	1,430	16,933	15,620	15,060	17,160
JOB ANALYSTS II.....	405	1,529	1,474	1,333	1,688	18,342	17,693	15,994	20,255
JOB ANALYSTS III.....	655	1,900	1,835	1,650	2,026	22,303	22,020	19,800	24,312
JOB ANALYSTS IV.....	436	2,394	2,345	2,124	2,642	28,725	28,140	25,490	31,701
DIRECTORS OF PERSONNEL I.....	877	2,341	2,199	2,041	2,624	28,090	26,389	24,490	31,487
DIRECTORS OF PERSONNEL II.....	1,742	2,926	2,833	2,625	3,276	35,108	33,991	31,500	39,309
DIRECTORS OF PERSONNEL III.....	727	3,616	3,590	3,332	3,883	43,389	43,083	39,984	46,596
DIRECTORS OF PERSONNEL IV.....	319	4,519	4,562	3,895	5,165	54,224	54,747	46,740	61,975
<b>ATTORNEYS</b>									
ATTORNEYS I.....	1,565	1,865	1,792	1,629	2,083	22,383	21,504	19,553	24,390
ATTORNEYS II.....	2,296	2,341	2,291	2,100	2,574	28,087	27,489	25,200	30,388
ATTORNEYS III.....	3,013	3,036	2,998	2,657	3,333	36,431	35,977	32,004	39,996
ATTORNEYS IV.....	2,459	3,749	3,685	3,332	4,109	44,988	44,220	39,984	49,305
ATTORNEYS V.....	1,506	4,598	4,498	4,042	5,050	55,172	53,978	48,504	60,500
ATTORNEYS VI.....	656	5,581	5,329	4,833	6,099	65,974	63,948	57,996	73,186
<b>BUYERS</b>									
BUYERS I.....	5,669	1,364	1,329	1,203	1,490	16,372	15,948	14,436	17,384
BUYERS II.....	16,183	1,696	1,656	1,500	1,841	20,358	19,872	18,000	22,092
BUYERS III.....	15,095	2,119	2,080	1,860	2,303	25,430	24,960	22,320	27,636
BUYERS IV.....	5,217	2,554	2,494	2,239	2,801	30,644	29,928	26,858	33,512
<b>CHEMISTS AND ENGINEERS</b>									
CHEMISTS I.....	3,182	1,519	1,500	1,374	1,641	18,226	18,000	16,493	19,692
CHEMISTS II.....	5,370	1,757	1,724	1,560	1,924	21,083	20,692	18,720	23,091
CHEMISTS III.....	9,920	2,131	2,105	1,907	2,333	25,571	25,260	22,881	27,996
CHEMISTS IV.....	9,526	2,585	2,574	2,338	2,792	31,024	30,888	28,057	33,504
CHEMISTS V.....	7,196	3,056	3,036	2,749	3,311	36,571	36,427	32,987	39,611
CHEMISTS VI.....	3,333	3,511	3,400	3,143	3,783	42,136	40,800	37,716	45,391
CHEMISTS VII.....	1,407	4,060	3,875	3,660	4,248	48,720	46,500	43,920	50,980
ENGINEERS I.....	26,302	1,814	1,810	1,695	1,925	21,766	21,720	20,335	23,100
ENGINEERS II.....	43,509	1,976	1,955	1,810	2,123	23,718	23,463	21,720	25,476
ENGINEERS III.....	96,117	2,236	2,200	2,014	2,421	26,827	26,400	24,168	29,056
ENGINEERS IV.....	123,548	2,618	2,591	2,368	2,850	31,416	31,088	28,415	34,204
ENGINEERS V.....	91,396	3,065	3,040	2,774	3,340	36,786	36,480	33,287	40,080
ENGINEERS VI.....	43,400	3,557	3,505	3,225	3,829	42,679	42,060	38,700	45,950
ENGINEERS VII.....	14,001	4,109	4,065	3,705	4,429	49,307	48,780	44,460	53,148
ENGINEERS VIII.....	2,661	4,730	4,649	4,270	5,141	56,762	55,790	51,240	61,692

See footnotes at end of table.

**Table 2. Continued—Average salaries: Metropolitan areas**

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, metropolitan areas,<sup>1</sup> United States, except Alaska and Hawaii, March 1981)

OCCUPATION AND LEVEL <sup>2</sup> /	NUMBER OF EMPLOYEES <sup>3</sup> /	MONTHLY SALARIES <sup>4</sup> /					ANNUAL SALARIES <sup>4</sup> /			
		MEAN	MEDIAN	MIDDLE RANGES <sup>5</sup> /		MEAN	MEDIAN	MIDDLE RANGES <sup>5</sup> /		
				FIRST QUARTILE	THIRD QUARTILE			FIRST QUARTILE	THIRD QUARTILE	
<b>TECHNICAL SUPPORT</b>										
ENGINEERING TECHNICIANS I.....	5,253	\$1,147	\$1,112	\$999	\$1,250	\$13,763	\$13,348	\$11,992	\$15,000	
ENGINEERING TECHNICIANS II.....	16,960	1,311	1,295	1,160	1,434	15,738	15,538	13,921	17,206	
ENGINEERING TECHNICIANS III.....	28,036	1,531	1,490	1,338	1,680	18,372	17,880	16,055	20,160	
ENGINEERING TECHNICIANS IV.....	33,147	1,807	1,777	1,630	1,964	21,682	21,325	19,563	23,568	
ENGINEERING TECHNICIANS V.....	18,340	2,057	2,029	1,865	2,229	24,588	24,349	22,382	26,748	
DRAFTERS I.....	2,574	932	900	840	978	11,180	10,801	10,080	11,732	
DRAFTERS II.....	10,925	1,080	1,050	950	1,183	12,956	12,600	11,400	14,194	
DRAFTERS III.....	21,211	1,307	1,277	1,152	1,425	15,683	15,329	13,824	17,102	
DRAFTERS IV.....	23,299	1,620	1,582	1,420	1,783	19,437	18,984	17,040	21,391	
DRAFTERS V.....	18,724	2,023	1,975	1,733	2,257	24,275	23,700	22,796	27,089	
COMPUTER OPERATORS I.....	5,644	906	882	802	991	10,867	10,584	9,620	11,392	
COMPUTER OPERATORS II.....	11,308	1,061	1,019	921	1,151	12,728	12,228	11,054	13,817	
COMPUTER OPERATORS III.....	26,295	1,225	1,182	1,043	1,340	14,701	14,182	12,514	16,080	
COMPUTER OPERATORS IV.....	15,408	1,479	1,425	1,258	1,629	17,743	17,100	15,094	19,552	
COMPUTER OPERATORS V.....	3,348	1,730	1,670	1,464	1,925	20,760	20,044	17,563	23,098	
PHOTOGRAPHERS II.....	468	1,416	1,437	1,124	1,641	15,995	17,247	13,494	19,692	
PHOTOGRAPHERS III.....	639	1,722	1,711	1,534	1,910	20,664	20,532	18,405	22,921	
PHOTOGRAPHERS IV.....	380	1,985	1,934	1,738	2,238	23,814	23,202	20,856	26,356	
<b>CLERICAL</b>										
ACCOUNTING CLERKS I.....	27,948	796	760	687	850	9,554	9,125	8,238	10,200	
ACCOUNTING CLERKS II.....	75,726	955	915	808	1,038	11,460	10,980	9,698	12,456	
ACCOUNTING CLERKS III.....	54,444	1,123	1,080	950	1,249	13,472	12,956	11,400	14,988	
ACCOUNTING CLERKS IV.....	21,019	1,406	1,350	1,173	1,600	16,877	16,200	14,078	19,200	
FILE CLERKS I.....	24,894	695	665	608	741	8,341	7,982	7,297	8,891	
FILE CLERKS II.....	10,798	819	760	691	865	9,831	9,125	8,290	10,380	
FILE CLERKS III.....	3,602	970	904	802	1,054	11,646	10,845	9,628	12,548	
KEY ENTRY OPERATORS I.....	62,087	890	845	743	981	10,682	10,140	8,914	11,773	
KEY ENTRY OPERATORS II.....	37,785	1,081	1,025	895	1,202	12,975	12,305	10,741	14,424	
MESSENGERS.....	14,840	779	725	652	849	9,351	8,700	7,822	10,188	
PERSONNEL CLERKS/ASSISTANTS I.....	2,047	913	874	790	988	10,950	10,491	9,480	11,951	
PERSONNEL CLERKS/ASSISTANTS II.....	4,184	1,071	1,008	916	1,175	12,850	12,096	10,996	14,100	
PERSONNEL CLERKS/ASSISTANTS III.....	3,185	1,189	1,166	1,043	1,297	14,265	13,994	12,515	15,359	
PERSONNEL CLERKS/ASSISTANTS IV.....	1,679	1,410	1,325	1,230	1,504	16,923	15,906	14,760	18,043	
PERSONNEL CLERKS/ASSISTANTS V.....	384	1,663	1,649	1,475	1,790	19,952	19,792	17,700	21,480	
PURCHASING ASSISTANTS I.....	4,187	1,019	982	875	1,084	12,227	11,784	10,503	13,308	
PURCHASING ASSISTANTS II.....	3,631	1,291	1,208	1,073	1,456	15,498	14,494	12,879	17,472	
PURCHASING ASSISTANTS III.....	1,762	1,662	1,575	1,403	1,830	19,942	18,896	16,831	21,961	
SECRETARIES I.....	59,179	1,081	1,025	900	1,182	12,973	12,300	10,800	14,182	
SECRETARIES II.....	55,438	1,148	1,121	996	1,275	13,778	13,455	11,957	15,300	
SECRETARIES III.....	100,576	1,303	1,255	1,100	1,450	15,631	15,060	13,200	17,400	
SECRETARIES IV.....	40,822	1,410	1,390	1,213	1,585	16,916	16,685	14,557	19,316	
SECRETARIES V.....	22,235	1,638	1,601	1,390	1,851	19,656	19,214	16,685	22,212	
STENOGRAPHERS I.....	15,932	1,096	1,041	875	1,293	13,147	12,493	10,495	15,512	
STENOGRAPHERS II.....	13,577	1,308	1,316	1,075	1,525	15,702	15,792	12,900	18,301	
TYPISTS I.....	35,975	829	780	697	891	9,944	9,356	8,364	10,689	
TYPISTS II.....	20,578	1,029	956	826	1,158	12,347	11,471	9,907	13,898	

<sup>1</sup> For scope of study, see table A-1 in appendix A.  
<sup>2</sup> Occupational definitions appear in appendix C.  
<sup>3</sup> Occupational employment estimates relate to the total in all establishments within the scope of the survey and not to the number actually surveyed. For further explanation, see appendix A.  
<sup>4</sup> Salaries reported are standard salaries paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.  
<sup>5</sup> The middle range (interquartile) is the central part of the array excluding the upper and lower fourths of the employee distribution.

**Table 3. Average salaries: Establishments employing 2,500 workers or more**

(Employment and average monthly salaries for selected professional, administrative, technical, and clerical occupations in private industry,<sup>1</sup> in establishments employing 2,500 workers or more,<sup>2</sup> United States, except Alaska and Hawaii, March 1981)

OCCUPATION AND LEVEL <sup>1</sup> /	NUMBER OF EMPLOYEES <sup>4</sup> /	MONTHLY SALARIES <sup>5</sup> /				LEVELS IN ESTABLISHMENTS EMPLOYING 2,500 WORKERS OR MORE EXPRESSED AS PERCENT OF THOSE IN ALL ESTABLISHMENTS COMBINED	
		MEAN	MEDIAN	MIDDLE RANGES <sup>6</sup> /		EMPLOYMENT	MEAN SALARIES
				FIRST QUARTILE	THIRD QUARTILE		
<b>ACCOUNTANTS AND AUDITORS</b>							
ACCOUNTANTS I.....	3,377	\$1,500	\$1,460	\$1,337	\$1,657	25	109
ACCOUNTANTS II.....	7,352	1,880	1,860	1,608	2,161	33	112
ACCOUNTANTS III.....	8,969	2,098	2,078	1,816	2,375	26	107
ACCOUNTANTS IV.....	6,650	2,480	2,450	2,182	2,749	31	103
ACCOUNTANTS V.....	2,997	2,999	2,970	2,674	3,260	35	102
ACCOUNTANTS VI.....	722	3,675	3,575	3,320	3,930	47	101
CHIEF ACCOUNTANTS III.....	113	3,562	3,467	3,285	3,802	17	95
AUDITORS I.....	561	1,433	1,391	1,256	1,550	30	105
AUDITORS II.....	1,020	1,781	1,737	1,542	1,978	31	108
AUDITORS III.....	1,672	2,142	2,135	1,897	2,399	39	105
AUDITORS IV.....	1,154	2,581	2,572	2,249	2,893	44	105
<b>PERSONNEL MANAGEMENT</b>							
JOB ANALYSTS II.....	168	1,670	1,641	1,416	1,857	40	110
JOB ANALYSTS III.....	352	1,976	1,883	1,717	2,116	53	104
JOB ANALYSTS IV.....	325	2,413	2,384	2,188	2,608	73	101
DIRECTORS OF PERSONNEL III.....	117	3,899	3,907	3,435	4,307	14	139
DIRECTORS OF PERSONNEL IV.....	162	4,846	4,916	4,226	5,375	46	108
<b>ATTORNEYS</b>							
ATTORNEYS I.....	329	2,138	2,193	1,917	2,416	21	114
ATTORNEYS II.....	689	2,520	2,529	2,249	2,725	29	103
ATTORNEYS III.....	989	3,144	3,116	2,798	3,424	32	104
ATTORNEYS IV.....	904	3,861	3,750	3,382	4,240	36	103
ATTORNEYS V.....	696	4,707	4,607	4,167	5,198	44	103
ATTORNEYS VI.....	323	5,759	5,583	5,081	6,353	48	103
<b>BUYERS</b>							
BUYERS I.....	1,054	1,534	1,460	1,328	1,687	16	114
BUYERS II.....	4,803	1,826	1,766	1,586	2,033	25	108
BUYERS III.....	6,282	2,213	2,157	1,915	2,457	36	105
BUYERS IV.....	3,117	2,512	2,540	2,259	2,925	56	102
<b>CHEMISTS AND ENGINEERS</b>							
CHEMISTS I.....	607	1,702	1,700	1,519	1,865	17	113
CHEMISTS II.....	1,891	1,870	1,846	1,626	2,090	31	106
CHEMISTS III.....	3,524	2,251	2,235	1,960	2,526	30	106
CHEMISTS IV.....	3,832	2,703	2,685	2,427	2,950	34	105
CHEMISTS V.....	3,161	3,125	3,065	2,750	3,417	36	102
CHEMISTS VI.....	1,564	3,597	3,417	3,145	3,950	41	103
CHEMISTS VII.....	693	4,153	3,700	3,648	4,419	43	102
ENGINEERS I.....	13,596	1,842	1,830	1,715	1,950	48	102
ENGINEERS II.....	21,536	2,022	1,999	1,862	2,167	45	103
ENGINEERS III.....	49,462	2,283	2,250	2,053	2,490	46	102
ENGINEERS IV.....	70,265	2,667	2,647	2,403	2,922	52	102
ENGINEERS V.....	56,684	3,090	3,065	2,794	3,366	58	101
ENGINEERS VI.....	27,270	3,564	3,519	3,249	3,816	50	100
ENGINEERS VII.....	10,269	4,124	4,075	3,737	4,430	71	100
ENGINEERS VIII.....	1,795	4,790	4,680	4,345	5,083	54	101

See footnotes at end of table.

**Table 3. Continued—Average salaries: Establishments employing 2,500 workers or more**

(Employment and average monthly salaries for selected professional, administrative, technical, and clerical occupations in private industry,<sup>1</sup> in establishments employing 2,500 workers or more,<sup>2</sup> United States, except Alaska and Hawaii, March 1981)

OCCUPATION AND LEVEL <sup>3</sup>	NUMBER OF EMPLOYEES <sup>4</sup>	MONTHLY SALARIES <sup>5</sup>				LEVELS IN ESTABLISHMENTS EMPLOYING 2,500 WORKERS OR MORE EXPRESSED AS PERCENT OF THOSE IN ALL ESTABLISHMENTS COMBINED	
		MEAN	MEDIAN	MIDDLE RANGE <sup>6</sup>		EMPLOYMENT	MEAN SALARIES
				FIRST QUARTILE	THIRD QUARTILE		
<b>TECHNICAL SUPPORT</b>							
ENGINEERING TECHNICIANS I.....	2,502	\$1,206	\$1,184	\$1,032	\$1,330	42	105
ENGINEERING TECHNICIANS II.....	7,384	1,379	1,340	1,211	1,520	39	106
ENGINEERING TECHNICIANS III.....	13,919	1,572	1,531	1,366	1,755	35	103
ENGINEERING TECHNICIANS IV.....	18,867	1,929	1,794	1,647	2,005	53	101
ENGINEERING TECHNICIANS V.....	13,559	2,062	2,041	1,883	2,230	71	101
DRAFTERS I.....	648	1,009	957	875	1,041	23	109
DRAFTERS II.....	3,033	1,185	1,156	1,021	1,342	24	110
DRAFTERS III.....	6,074	1,445	1,392	1,237	1,614	25	111
DRAFTERS IV.....	7,934	1,705	1,668	1,474	1,900	30	106
DRAFTERS V.....	9,179	2,081	2,008	1,766	2,339	46	103
COMPUTER OPERATORS I.....	1,827	1,005	992	869	1,098	30	111
COMPUTER OPERATORS II.....	3,254	1,203	1,184	1,009	1,374	25	115
COMPUTER OPERATORS III.....	7,919	1,386	1,327	1,161	1,515	27	114
COMPUTER OPERATORS IV.....	6,071	1,532	1,575	1,395	1,827	36	111
COMPUTER OPERATORS V.....	1,843	1,860	1,859	1,605	2,003	52	107
PHOTOGRAPHERS II.....	224	1,544	1,570	1,312	1,761	42	108
PHOTOGRAPHERS III.....	371	1,731	1,711	1,524	1,992	53	102
PHOTOGRAPHERS IV.....	333	1,904	1,847	1,613	2,231	74	99
<b>CLERICAL</b>							
ACCOUNTING CLERKS II.....	14,782	1,106	1,034	904	1,294	17	116
ACCOUNTING CLERKS III.....	13,056	1,266	1,238	1,050	1,415	22	113
ACCOUNTING CLERKS IV.....	8,166	1,584	1,525	1,355	1,820	35	113
FILE CLERKS I.....	2,762	751	700	639	795	10	107
FILE CLERKS II.....	2,502	924	817	708	1,051	21	113
FILE CLERKS III.....	1,188	1,047	934	810	1,252	31	107
KEY ENTRY OPERATORS I.....	11,362	1,075	1,005	847	1,236	16	121
KEY ENTRY OPERATORS II.....	11,540	1,213	1,121	962	1,435	28	112
MESSENGERS.....	4,725	854	769	683	939	30	109
PERSONNEL CLERKS/ASSISTANTS I.....	275	1,043	982	843	1,195	11	116
PERSONNEL CLERKS/ASSISTANTS II.....	1,053	1,190	1,151	966	1,367	21	112
PERSONNEL CLERKS/ASSISTANTS III.....	549	1,381	1,359	1,173	1,575	14	116
PURCHASING ASSISTANTS I.....	741	1,219	1,204	966	1,422	14	122
PURCHASING ASSISTANTS II.....	1,282	1,458	1,430	1,141	1,710	30	114
PURCHASING ASSISTANTS III.....	1,182	1,774	1,672	1,500	1,996	62	108
SECRETARIES I.....	17,949	1,230	1,125	978	1,435	28	114
SECRETARIES II.....	20,886	1,226	1,191	1,074	1,340	34	107
SECRETARIES III.....	40,909	1,418	1,365	1,183	1,616	38	109
SECRETARIES IV.....	14,680	1,535	1,525	1,347	1,712	34	109
SECRETARIES V.....	8,591	1,782	1,766	1,532	2,010	37	109
STENOGRAPHERS I.....	8,982	1,122	1,055	889	1,314	52	102
STENOGRAPHERS II.....	7,720	1,375	1,392	1,170	1,568	52	105
TYPISTS I.....	8,558	924	856	751	1,025	22	111
TYPISTS II.....	8,681	1,125	1,055	882	1,335	40	109

<sup>1</sup> For scope of study, see table A-1 in appendix A.

<sup>2</sup> Includes data from a few large companies that provide company-wide data not identified by size of establishment.

<sup>3</sup> Occupational definitions appear in appendix C.

<sup>4</sup> Occupational employment estimates relate to the total in all establishments within the scope of the survey and not to the number actually surveyed. For further explanation, see appendix A.

<sup>5</sup> Salaries reported are standard salaries paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.

<sup>6</sup> The middle range (interquartile) is the central part of the array excluding the upper and lower fourths of the employee distribution.

**Table 4. Employment distribution by salary: Professional and administrative occupations**

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,<sup>1</sup> March 1961)

MONTHLY SALARY	ACCOUNTANTS						CHIEF ACCOUNTANTS			
	I	II	III	IV	V	VI	I	II	III	IV
UNDER \$1,000.....	2.5	-	-	-	-	-	-	-	-	-
\$1,000 AND UNDER \$1,050.....	1.5	-	-	-	-	-	-	-	-	-
\$1,050 AND UNDER \$1,100.....	3.4	-	-	-	-	-	-	-	-	-
\$1,100 AND UNDER \$1,150.....	3.5	(1.2)	-	-	-	-	-	-	-	-
\$1,150 AND UNDER \$1,200.....	6.0	1.4	-	-	-	-	-	-	-	-
\$1,200 AND UNDER \$1,250.....	11.0	2.3	-	-	-	-	-	-	-	-
\$1,250 AND UNDER \$1,300.....	10.3	2.8	-	-	-	-	-	-	-	-
\$1,300 AND UNDER \$1,350.....	11.7	3.7	-	-	-	-	-	-	-	-
\$1,350 AND UNDER \$1,400.....	8.9	4.8	(1.8)	-	-	-	-	-	-	-
\$1,400 AND UNDER \$1,450.....	9.4	6.1	1.6	-	-	-	-	-	-	-
\$1,450 AND UNDER \$1,500.....	8.0	8.1	2.5	-	-	-	-	-	-	-
\$1,500 AND UNDER \$1,550.....	5.2	9.9	3.5	-	-	-	-	-	-	-
\$1,550 AND UNDER \$1,600.....	5.0	7.2	3.7	-	-	-	-	-	-	-
\$1,600 AND UNDER \$1,650.....	3.8	6.3	3.3	-	-	-	-	-	-	-
\$1,650 AND UNDER \$1,700.....	2.4	6.7	5.2	-	-	-	-	-	-	-
\$1,700 AND UNDER \$1,750.....	2.0	5.1	6.5	(1.8)	-	-	-	-	-	-
\$1,750 AND UNDER \$1,800.....	1.2	5.0	5.1	1.2	-	-	-	-	-	-
\$1,800 AND UNDER \$1,850.....	1.3	4.6	7.7	1.9	-	-	-	-	-	-
\$1,850 AND UNDER \$1,900.....	(2.9)	3.4	5.1	1.7	-	-	-	-	-	-
\$1,900 AND UNDER \$1,950.....	-	2.9	6.8	2.5	-	-	-	-	-	-
\$1,950 AND UNDER \$2,000.....	-	2.0	6.2	3.3	-	-	-	-	-	-
\$2,000 AND UNDER \$2,050.....	-	2.1	5.0	4.6	-	-	-	-	-	-
\$2,050 AND UNDER \$2,100.....	-	2.4	5.8	5.1	-	-	-	-	-	-
\$2,100 AND UNDER \$2,150.....	-	1.9	3.9	4.3	-	-	(0.9)	-	-	-
\$2,150 AND UNDER \$2,200.....	-	1.6	3.5	4.6	(2.8)	-	4.1	-	-	-
\$2,200 AND UNDER \$2,250.....	-	2.3	3.3	5.5	1.7	-	4.7	-	-	-
\$2,250 AND UNDER \$2,300.....	-	1.0	3.1	5.5	1.5	-	2.4	-	-	-
\$2,300 AND UNDER \$2,350.....	-	3.0	3.5	6.5	1.6	-	5.3	(0.9)	-	-
\$2,350 AND UNDER \$2,400.....	-	(2.2)	2.2	5.0	2.9	-	7.6	1.9	-	-
\$2,400 AND UNDER \$2,450.....	-	-	1.9	5.0	2.3	-	5.0	3.9	-	-
\$2,450 AND UNDER \$2,500.....	-	-	2.0	5.2	4.0	-	8.7	4.2	-	-
\$2,500 AND UNDER \$2,600.....	-	-	2.6	9.1	7.0	-	2.1	4.8	(0.3)	-
\$2,600 AND UNDER \$2,700.....	-	-	2.5	6.9	7.9	(0.4)	7.8	14.1	1.0	-
\$2,700 AND UNDER \$2,800.....	-	-	(1.6)	5.7	8.7	1.8	26.0	8.5	-1	-
\$2,800 AND UNDER \$2,900.....	-	-	-	3.8	9.0	1.8	12.1	5.1	-	-
\$2,900 AND UNDER \$3,000.....	-	-	-	4.6	10.0	2.3	6.3	7.2	.4	-
\$3,000 AND UNDER \$3,100.....	-	-	-	2.4	8.3	5.3	1.5	13.8	4.8	-
\$3,100 AND UNDER \$3,200.....	-	-	-	1.2	7.1	3.6	5.6	9.6	5.7	-
\$3,200 AND UNDER \$3,300.....	-	-	-	(2.4)	6.0	8.6	-	7.4	2.7	-
\$3,300 AND UNDER \$3,400.....	-	-	-	-	6.4	9.9	-	8.3	7.6	-
\$3,400 AND UNDER \$3,500.....	-	-	-	-	2.9	8.2	-	3.0	14.1	-
\$3,500 AND UNDER \$3,600.....	-	-	-	-	2.6	10.4	-	4.2	8.6	-
\$3,600 AND UNDER \$3,700.....	-	-	-	-	1.8	9.1	-	1.2	7.7	-
\$3,700 AND UNDER \$3,800.....	-	-	-	-	1.4	6.6	-	.5	8.6	-
\$3,800 AND UNDER \$3,900.....	-	-	-	-	2.1	3.2	-	-	9.1	1.8
\$3,900 AND UNDER \$4,000.....	-	-	-	-	(1.9)	7.0	-	-	10.3	-
\$4,000 AND UNDER \$4,100.....	-	-	-	-	-	4.7	-	-	5.7	1.8
\$4,100 AND UNDER \$4,200.....	-	-	-	-	-	4.3	-	1.4	.6	11.7
\$4,200 AND UNDER \$4,300.....	-	-	-	-	-	3.4	-	(0.1)	2.8	2.5
\$4,300 AND UNDER \$4,400.....	-	-	-	-	-	2.3	-	-	.4	1.8
\$4,400 AND UNDER \$4,500.....	-	-	-	-	-	1.2	-	-	.9	22.1
\$4,500 AND UNDER \$4,600.....	-	-	-	-	-	2.6	-	-	4.0	12.3
\$4,600 AND UNDER \$4,700.....	-	-	-	-	-	(3.4)	-	-	.1	4.9
\$4,700 AND UNDER \$4,800.....	-	-	-	-	-	-	-	-	.1	1.8
\$4,800 AND UNDER \$4,900.....	-	-	-	-	-	-	-	-	-	17.2
\$4,900 AND UNDER \$5,000.....	-	-	-	-	-	-	-	-	-	4.9
\$5,000 AND UNDER \$5,100.....	-	-	-	-	-	-	-	-	4.2	-
\$5,100 AND UNDER \$5,200.....	-	-	-	-	-	-	-	-	-	7.4
\$5,200 AND UNDER \$5,300.....	-	-	-	-	-	-	-	-	-	2.5
\$5,300 AND UNDER \$5,400.....	-	-	-	-	-	-	-	-	-	-
\$5,400 AND UNDER \$5,500.....	-	-	-	-	-	-	-	-	-	3.7
\$5,500 AND UNDER \$5,600.....	-	-	-	-	-	-	-	-	-	-
\$5,600 AND UNDER \$5,700.....	-	-	-	-	-	-	-	-	-	3.7
TOTAL .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	13,290	21,975	34,450	21,326	8,488	1,539	680	938	672	163
AVERAGE MONTHLY SALARY.....	\$1,377	\$1,679	\$1,962	\$2,402	\$2,928	\$3,646	\$2,631	\$2,963	\$3,708	\$4,668

See footnotes at end of table.

**Table 4. Continued—Employment distribution by salary: Professional and administrative occupations**

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,<sup>1</sup> March 1981)

MONTHLY SALARY	AUDITORS				PUBLIC ACCOUNTANTS			
	I	II	III	IV	I	II	III	IV
UNDER \$1,000.....	0.9	-	-	-	-	-	-	-
\$1,000 AND UNDER \$1,050.....	1.8	-	-	-	(0.4)	-	-	-
\$1,050 AND UNDER \$1,100.....	3.9	-	-	-	1.4	-	-	-
\$1,100 AND UNDER \$1,150.....	8.1	(1.0)	-	-	1.3	-	-	-
\$1,150 AND UNDER \$1,200.....	6.2	2.1	-	-	3.8	-	-	-
\$1,200 AND UNDER \$1,250.....	7.0	2.0	-	-	10.4	(1.9)	-	-
\$1,250 AND UNDER \$1,300.....	9.8	3.6	-	-	15.9	2.7	-	-
\$1,300 AND UNDER \$1,350.....	17.3	2.6	-	-	21.6	7.0	(0.6)	-
\$1,350 AND UNDER \$1,400.....	6.5	3.1	(1.0)	-	21.5	12.5	1.5	-
\$1,400 AND UNDER \$1,450.....	12.2	6.9	1.4	-	10.3	18.0	2.8	-
\$1,450 AND UNDER \$1,500.....	5.0	11.4	2.1	-	4.0	19.9	3.0	-
\$1,500 AND UNDER \$1,550.....	4.2	8.2	1.8	-	4.6	10.9	5.0	-
\$1,550 AND UNDER \$1,600.....	4.7	5.8	2.1	-	3.7	9.0	9.0	(1.1)
\$1,600 AND UNDER \$1,650.....	3.0	8.4	3.5	-	(1.2)	7.4	8.8	2.1
\$1,650 AND UNDER \$1,700.....	3.2	8.4	4.6	-	-	5.0	8.9	2.4
\$1,700 AND UNDER \$1,750.....	1.2	5.5	3.3	(1.8)	-	3.7	11.2	1.3
\$1,750 AND UNDER \$1,800.....	1.6	2.7	4.5	1.8	-	3.0	8.6	6.8
\$1,800 AND UNDER \$1,850.....	.8	5.9	6.3	2.3	-	1.4	7.9	5.4
\$1,850 AND UNDER \$1,900.....	.3	3.4	4.8	.3	-	(1.8)	5.8	4.6
\$1,900 AND UNDER \$1,950.....	.2	3.2	7.7	1.1	-	-	5.0	5.6
\$1,950 AND UNDER \$2,000.....	1.0	5.7	5.8	5.2	-	-	6.0	6.4
\$2,000 AND UNDER \$2,050.....	(1.0)	2.3	8.3	3.5	-	-	3.2	7.9
\$2,050 AND UNDER \$2,100.....	-	1.7	4.2	2.4	-	-	2.9	5.7
\$2,100 AND UNDER \$2,150.....	-	1.6	3.8	2.6	-	-	1.9	6.2
\$2,150 AND UNDER \$2,200.....	-	1.0	6.0	5.4	-	-	1.7	5.5
\$2,200 AND UNDER \$2,250.....	-	.5	4.2	7.9	-	-	1.5	6.6
\$2,250 AND UNDER \$2,300.....	-	.6	3.3	5.9	-	-	1.5	4.6
\$2,300 AND UNDER \$2,350.....	-	1.1	3.7	5.3	-	-	(3.2)	5.1
\$2,350 AND UNDER \$2,400.....	-	(1.4)	2.3	4.7	-	-	-	2.8
\$2,400 AND UNDER \$2,450.....	-	-	3.4	4.0	-	-	-	3.3
\$2,450 AND UNDER \$2,500.....	-	-	3.3	5.7	-	-	-	3.6
\$2,500 AND UNDER \$2,600.....	-	-	2.6	8.0	-	-	-	2.6
\$2,600 AND UNDER \$2,700.....	-	-	3.0	6.4	-	-	-	2.9
\$2,700 AND UNDER \$2,800.....	-	-	1.3	5.3	-	-	-	2.4
\$2,800 AND UNDER \$2,900.....	-	-	(1.7)	5.1	-	-	-	2.5
\$2,900 AND UNDER \$3,000.....	-	-	-	4.9	-	-	-	1.3
\$3,000 AND UNDER \$3,100.....	-	-	-	2.6	-	-	-	(1.4)
\$3,100 AND UNDER \$3,200.....	-	-	-	3.2	-	-	-	-
\$3,200 AND OVER.....	-	-	-	4.3	-	-	-	-
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	1,849	3,251	4,313	2,649	8,443	8,721	7,868	3,875
AVERAGE MONTHLY SALARY.....	\$1,364	\$1,651	\$2,033	\$2,456	\$1,344	\$1,500	\$1,786	\$2,146

See footnotes at end of table.

**Table 4. Continued—Employment distribution by salary: Professional and administrative occupations**

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,<sup>1</sup> March 1981)

MONTHLY SALARY	JOB ANALYSTS				DIRECTORS OF PERSONNEL			
	I	II	III	IV	I	II	III	IV
\$975 AND UNDER \$1,000.....	3.9	-	-	-	-	-	-	-
\$1,050 AND UNDER \$1,100.....	.6	1.9	-	-	-	-	-	-
\$1,100 AND UNDER \$1,150.....	2.2	3.8	-	-	-	-	-	-
\$1,150 AND UNDER \$1,200.....	2.8	1.9	-	-	-	-	-	-
\$1,200 AND UNDER \$1,250.....	14.4	5.2	-	-	-	-	-	-
\$1,250 AND UNDER \$1,300.....	18.2	4.0	-	-	-	-	-	-
\$1,300 AND UNDER \$1,350.....	15.5	11.6	-	-	-	-	-	-
\$1,350 AND UNDER \$1,400.....	9.9	9.7	-	-	-	-	-	-
\$1,400 AND UNDER \$1,450.....	7.7	7.3	(2.4)	-	-	-	-	-
\$1,450 AND UNDER \$1,500.....	6.1	8.5	1.8	-	-	-	-	-
\$1,500 AND UNDER \$1,550.....	3.3	13.0	3.9	-	-	-	-	-
\$1,550 AND UNDER \$1,600.....	-	3.8	5.9	-	-	-	-	-
\$1,600 AND UNDER \$1,650.....	.6	2.8	10.4	-	4.1	-	-	-
\$1,650 AND UNDER \$1,700.....	.6	5.0	4.4	(2.0)	.9	-	-	-
\$1,700 AND UNDER \$1,750.....	1.1	4.0	6.6	2.2	1.6	-	-	-
\$1,750 AND UNDER \$1,800.....	.6	4.5	4.1	1.3	.6	-	-	-
\$1,800 AND UNDER \$1,850.....	.6	1.7	12.0	1.1	.5	-	-	-
\$1,850 AND UNDER \$1,900.....	.6	.9	6.9	.9	4.6	-	-	-
\$1,900 AND UNDER \$1,950.....	1.7	.9	3.6	4.0	3.2	-	-	-
\$1,950 AND UNDER \$2,000.....	.6	2.4	5.3	1.6	5.4	-	-	-
\$2,000 AND UNDER \$2,050.....	1.1	.7	9.8	6.3	11.4	-	-	-
\$2,050 AND UNDER \$2,100.....	2.8	.9	5.1	2.5	5.1	-	-	-
\$2,100 AND UNDER \$2,150.....	2.2	.7	5.4	2.9	5.1	-	-	-
\$2,150 AND UNDER \$2,200.....	.6	2.1	1.4	3.8	6.4	(1.6)	-	-
\$2,200 AND UNDER \$2,250.....	2.8	(2.8)	1.4	8.3	3.2	5.5	-	-
\$2,250 AND UNDER \$2,300.....	-	-	.8	5.1	7.2	2.4	-	-
\$2,300 AND UNDER \$2,350.....	-	-	.5	8.9	2.0	2.8	-	-
\$2,350 AND UNDER \$2,400.....	-	-	.5	5.4	1.1	1.3	-	-
\$2,400 AND UNDER \$2,450.....	-	-	.5	4.7	1.7	1.4	-	-
\$2,450 AND UNDER \$2,500.....	-	-	.6	5.1	5.6	4.8	1.7	-
\$2,500 AND UNDER \$2,600.....	-	-	1.8	8.3	3.5	4.2	2.2	-
\$2,600 AND UNDER \$2,700.....	-	-	.8	4.0	5.1	9.8	2.1	-
\$2,700 AND UNDER \$2,800.....	-	-	.6	7.6	3.5	13.5	.7	-
\$2,800 AND UNDER \$2,900.....	-	-	2.4	3.1	2.5	4.2	4.8	-
\$2,900 AND UNDER \$3,000.....	-	-	1.1	3.3	4.1	7.4	4.1	-
\$3,000 AND UNDER \$3,100.....	-	-	.6	3.3	4.2	6.7	2.7	-
\$3,100 AND UNDER \$3,200.....	-	-	.2	1.6	1.6	3.7	4.4	-
\$3,200 AND UNDER \$3,300.....	-	-	-	.9	1.7	5.4	4.4	-
\$3,300 AND UNDER \$3,400.....	-	-	-	2.5	-	11.2	7.5	6.3
\$3,400 AND UNDER \$3,500.....	-	-	-	(0.7)	2.1	2.5	11.2	9.7
\$3,500 AND UNDER \$3,600.....	-	-	-	-	-	4.0	8.9	-
\$3,600 AND UNDER \$3,700.....	-	-	-	-	-	.7	9.0	2.0
\$3,700 AND UNDER \$3,800.....	-	-	-	-	-	3.4	7.1	1.1
\$3,800 AND UNDER \$3,900.....	-	-	-	-	-	1.0	5.4	4.8
\$3,900 AND UNDER \$4,000.....	-	-	-	-	-	1.1	4.9	11.4
\$4,000 AND UNDER \$4,100.....	-	-	-	-	-	(1.4)	1.1	1.4
\$4,100 AND UNDER \$4,200.....	-	-	-	-	-	-	3.6	4.5
\$4,200 AND UNDER \$4,300.....	-	-	-	-	-	-	3.6	4.3
\$4,300 AND UNDER \$4,400.....	-	-	-	-	-	-	3.1	3.1
\$4,400 AND UNDER \$4,500.....	-	-	-	-	-	-	2.7	1.7
\$4,500 AND UNDER \$4,600.....	-	-	-	-	-	-	.2	7.1
\$4,600 AND UNDER \$4,700.....	-	-	-	-	-	-	1.2	7.4
\$4,700 AND UNDER \$4,800.....	-	-	-	-	-	-	.4	.9
\$4,800 AND UNDER \$4,900.....	-	-	-	-	-	-	1.0	.6
\$4,900 AND UNDER \$5,000.....	-	-	-	-	-	-	1.0	3.7
\$5,000 AND UNDER \$5,100.....	-	-	-	-	-	-	(0.9)	4.8
\$5,100 AND UNDER \$5,200.....	-	-	-	-	-	-	-	2.8
\$5,200 AND UNDER \$5,300.....	-	-	-	-	-	-	-	6.0
\$5,300 AND UNDER \$5,400.....	-	-	-	-	-	-	-	1.7
\$5,400 AND UNDER \$5,500.....	-	-	-	-	-	-	-	.6
\$5,500 AND UNDER \$5,600.....	-	-	-	-	-	-	-	3.1
\$5,600 AND UNDER \$5,700.....	-	-	-	-	-	-	-	2.3
\$5,700 AND UNDER \$5,800.....	-	-	-	-	-	-	-	1.1
\$5,800 AND UNDER \$5,900.....	-	-	-	-	-	-	-	4.3
\$5,900 AND UNDER \$6,000.....	-	-	-	-	-	-	-	2.0
\$6,000 AND UNDER \$6,100.....	-	-	-	-	-	-	-	1.1
\$6,200 AND UNDER \$6,300.....	-	-	-	-	-	-	-	.3
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	181	424	666	448	1,267	2,053	812	352
AVERAGE MONTHLY SALARY.....	\$1,412	\$1,525	\$1,900	\$2,393	\$2,321	\$2,933	\$3,574	\$4,493

See footnotes at end of table.

**Table 4. Continued—Employment distribution by salary: Professional and administrative occupations**

(Percent distribution of employees in selected professional and administrative occupation by monthly salary, United States, except Alaska and Hawaii,<sup>1</sup> March 1981)

MONTHLY SALARY	ATTORNEYS					
	I	II	III	IV	V	VI
UNDER \$1,300.....	0.6	-	-	-	-	-
\$1,300 AND UNDER \$1,350.....	2.4	-	-	-	-	-
\$1,350 AND UNDER \$1,400.....	2.3	-	-	-	-	-
\$1,400 AND UNDER \$1,450.....	5.0	-	-	-	-	-
\$1,450 AND UNDER \$1,500.....	2.3	-	-	-	-	-
\$1,500 AND UNDER \$1,550.....	1.5	-	-	-	-	-
\$1,550 AND UNDER \$1,600.....	7.4	-	-	-	-	-
\$1,600 AND UNDER \$1,650.....	4.4	-	-	-	-	-
\$1,650 AND UNDER \$1,700.....	9.8	-	-	-	-	-
\$1,700 AND UNDER \$1,750.....	10.5	(2.5)	-	-	-	-
\$1,750 AND UNDER \$1,800.....	3.8	1.9	-	-	-	-
\$1,800 AND UNDER \$1,850.....	4.2	3.4	-	-	-	-
\$1,850 AND UNDER \$1,900.....	2.4	1.3	-	-	-	-
\$1,900 AND UNDER \$1,950.....	4.3	1.2	-	-	-	-
\$1,950 AND UNDER \$2,000.....	4.2	4.9	-	-	-	-
\$2,000 AND UNDER \$2,050.....	2.3	3.4	-	-	-	-
\$2,050 AND UNDER \$2,100.....	8.8	6.4	-	-	-	-
\$2,100 AND UNDER \$2,150.....	1.6	5.1	-	-	-	-
\$2,150 AND UNDER \$2,200.....	2.4	7.1	-	-	-	-
\$2,200 AND UNDER \$2,250.....	6.1	9.8	(0.7)	-	-	-
\$2,250 AND UNDER \$2,300.....	2.4	4.1	1.1	-	-	-
\$2,300 AND UNDER \$2,350.....	3.0	6.1	2.2	-	-	-
\$2,350 AND UNDER \$2,400.....	.8	5.2	1.1	-	-	-
\$2,400 AND UNDER \$2,450.....	2.3	3.3	2.2	-	-	-
\$2,450 AND UNDER \$2,500.....	1.6	1.7	6.5	-	-	-
\$2,500 AND UNDER \$2,600.....	1.6	11.4	6.3	(1.9)	-	-
\$2,600 AND UNDER \$2,700.....	1.1	6.0	6.9	1.1	-	-
\$2,700 AND UNDER \$2,800.....	(1.2)	6.7	7.2	1.8	-	-
\$2,800 AND UNDER \$2,900.....	-	2.5	6.4	1.0	-	-
\$2,900 AND UNDER \$3,000.....	-	1.8	11.4	2.4	0.1	-
\$3,000 AND UNDER \$3,100.....	-	1.7	7.9	4.2	1.8	-
\$3,100 AND UNDER \$3,200.....	-	1.0	4.9	7.1	2.8	-
\$3,200 AND UNDER \$3,300.....	-	(1.7)	5.6	4.9	.9	-
\$3,300 AND UNDER \$3,400.....	-	-	8.3	7.6	1.8	-
\$3,400 AND UNDER \$3,500.....	-	-	5.1	6.3	1.2	-
\$3,500 AND UNDER \$3,600.....	-	-	6.0	5.9	1.9	-
\$3,600 AND UNDER \$3,700.....	-	-	1.2	6.2	3.2	-
\$3,700 AND UNDER \$3,800.....	-	-	2.2	9.2	4.7	-
\$3,800 AND UNDER \$3,900.....	-	-	1.9	5.9	1.8	(0.5)
\$3,900 AND UNDER \$4,000.....	-	-	2.5	6.7	3.8	2.4
\$4,000 AND UNDER \$4,100.....	-	-	1.1	3.2	5.3	1.2
\$4,100 AND UNDER \$4,200.....	-	-	(1.0)	5.4	4.2	.3
\$4,200 AND UNDER \$4,300.....	-	-	-	4.2	6.5	.5
\$4,300 AND UNDER \$4,400.....	-	-	-	3.4	5.4	1.7
\$4,400 AND UNDER \$4,500.....	-	-	-	.9	6.4	2.0
\$4,500 AND UNDER \$4,600.....	-	-	-	1.7	6.9	1.8
\$4,600 AND UNDER \$4,700.....	-	-	-	1.0	3.3	2.6
\$4,700 AND UNDER \$4,800.....	-	-	-	1.5	3.8	3.6
\$4,800 AND UNDER \$4,900.....	-	-	-	1.3	4.2	11.0
\$4,900 AND UNDER \$5,000.....	-	-	-	1.5	1.8	2.0
\$5,000 AND UNDER \$5,100.....	-	-	-	(3.9)	5.1	6.9
\$5,100 AND UNDER \$5,200.....	-	-	-	-	4.2	5.1
\$5,200 AND UNDER \$5,300.....	-	-	-	-	2.8	5.1
\$5,300 AND UNDER \$5,400.....	-	-	-	-	2.0	6.3
\$5,400 AND UNDER \$5,500.....	-	-	-	-	3.2	2.4
\$5,500 AND UNDER \$5,600.....	-	-	-	-	.7	2.7
\$5,600 AND UNDER \$5,700.....	-	-	-	-	.8	2.0
\$5,700 AND UNDER \$5,800.....	-	-	-	-	.9	.6
\$5,800 AND UNDER \$5,900.....	-	-	-	-	.8	5.4
\$5,900 AND UNDER \$6,000.....	-	-	-	-	2.9	6.0
\$6,000 AND UNDER \$6,100.....	-	-	-	-	1.0	3.6
\$6,100 AND UNDER \$6,200.....	-	-	-	-	(4.1)	2.3
\$6,200 AND UNDER \$6,300.....	-	-	-	-	-	2.6
\$6,300 AND UNDER \$6,400.....	-	-	-	-	-	2.7
\$6,400 AND UNDER \$6,500.....	-	-	-	-	-	1.1
\$6,500 AND UNDER \$6,600.....	-	-	-	-	-	.8
\$6,600 AND UNDER \$6,700.....	-	-	-	-	-	4.1
\$6,700 AND UNDER \$6,800.....	-	-	-	-	-	.3
\$6,800 AND UNDER \$6,900.....	-	-	-	-	-	1.1
\$6,900 AND UNDER \$7,000.....	-	-	-	-	-	1.1
\$7,000 AND UNDER \$7,100.....	-	-	-	-	-	1.5
\$7,100 AND UNDER \$7,200.....	-	-	-	-	-	.2
\$7,200 AND UNDER \$7,300.....	-	-	-	-	-	1.5
\$7,300 AND UNDER \$7,400.....	-	-	-	-	-	.6
\$7,400 AND UNDER \$7,500.....	-	-	-	-	-	1.4
\$7,500 AND UNDER \$7,600.....	-	-	-	-	-	.3
\$7,600 AND UNDER \$7,700.....	-	-	-	-	-	.9
\$7,700 AND UNDER \$7,800.....	-	-	-	-	-	.2
\$7,800 AND UNDER \$7,900.....	-	-	-	-	-	.3
\$8,000 AND OVER.....	-	-	-	-	-	2.1
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	1,586	2,410	3,135	2,535	1,587	666
AVERAGE MONTHLY SALARY.....	\$1,873	\$2,338	\$3,031	\$3,738	\$4,566	\$5,580

See footnotes at end of table.



**Table 4. Continued—Employment distribution by salary: Professional and administrative occupations**

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,<sup>1</sup> March, 1961)

MONTHLY SALARY	BUYERS			
	I	II	III	IV
UNDER \$925.....	1.2	-	-	-
\$925 AND UNDER \$950.....	1.0	-	-	-
\$950 AND UNDER \$975.....	.6	-	-	-
\$975 AND UNDER \$1,000.....	1.4	-	-	-
\$1,000 AND UNDER \$1,050.....	4.1	-	-	-
\$1,050 AND UNDER \$1,100.....	4.7	-	-	-
\$1,100 AND UNDER \$1,150.....	6.9	-	-	-
\$1,150 AND UNDER \$1,200.....	7.7	(1.6)	-	-
\$1,200 AND UNDER \$1,250.....	8.4	2.1	-	-
\$1,250 AND UNDER \$1,300.....	10.5	2.4	-	-
\$1,300 AND UNDER \$1,350.....	8.4	3.2	-	-
\$1,350 AND UNDER \$1,400.....	8.6	4.8	-	-
\$1,400 AND UNDER \$1,450.....	7.0	5.2	(1.0)	-
\$1,450 AND UNDER \$1,500.....	6.5	6.1	1.0	-
\$1,500 AND UNDER \$1,550.....	5.1	7.7	1.5	-
\$1,550 AND UNDER \$1,600.....	3.8	7.3	1.8	-
\$1,600 AND UNDER \$1,650.....	4.0	8.5	2.7	-
\$1,650 AND UNDER \$1,700.....	2.6	8.3	2.9	-
\$1,700 AND UNDER \$1,750.....	1.2	7.6	5.0	-
\$1,750 AND UNDER \$1,800.....	1.5	5.4	4.6	-
\$1,800 AND UNDER \$1,850.....	1.1	6.3	5.4	(1.9)
\$1,850 AND UNDER \$1,900.....	.7	3.5	4.7	1.2
\$1,900 AND UNDER \$1,950.....	1.2	3.4	5.5	1.4
\$1,950 AND UNDER \$2,000.....	(1.8)	3.7	7.5	2.4
\$2,000 AND UNDER \$2,050.....	-	2.6	5.5	2.4
\$2,050 AND UNDER \$2,100.....	-	2.3	5.5	3.9
\$2,100 AND UNDER \$2,150.....	-	1.1	4.3	3.8
\$2,150 AND UNDER \$2,200.....	-	1.2	7.0	4.8
\$2,200 AND UNDER \$2,250.....	-	1.2	5.3	4.4
\$2,250 AND UNDER \$2,300.....	-	(4.6)	4.7	4.2
\$2,300 AND UNDER \$2,350.....	-	-	3.5	5.8
\$2,350 AND UNDER \$2,400.....	-	-	2.6	4.5
\$2,400 AND UNDER \$2,450.....	-	-	3.1	4.7
\$2,450 AND UNDER \$2,500.....	-	-	1.9	6.4
\$2,500 AND UNDER \$2,600.....	-	-	3.1	9.5
\$2,600 AND UNDER \$2,700.....	-	-	2.8	7.4
\$2,700 AND UNDER \$2,800.....	-	-	2.2	6.4
\$2,800 AND UNDER \$2,900.....	-	-	1.4	4.5
\$2,900 AND UNDER \$3,000.....	-	-	1.5	6.2
\$3,000 AND UNDER \$3,100.....	-	-	1.0	4.3
\$3,100 AND UNDER \$3,200.....	-	-	(1.0)	3.4
\$3,200 AND UNDER \$3,300.....	-	-	-	1.1
\$3,300 AND UNDER \$3,400.....	-	-	-	1.7
\$3,400 AND OVER.....	-	-	-	3.6
TOTAL.....	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	6,664	19,057	17,235	5,539
AVERAGE MONTHLY SALARY.....	\$1,350	\$1,689	\$2,100	\$2,549

See footnotes at end of table.

**Table 4. Continued—Employment distribution by salary: Professional and administrative occupations**

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,<sup>1</sup> March 1981)

MONTHLY SALARY	CHEMISTS						
	I	II	III	IV	V	VI	VII
\$1,000 AND UNDER \$1,050.....	2.5	-	-	-	-	-	-
\$1,050 AND UNDER \$1,100.....	1.0	-	-	-	-	-	-
\$1,100 AND UNDER \$1,150.....	.8	-	-	-	-	-	-
\$1,150 AND UNDER \$1,200.....	4.8	-	-	-	-	-	-
\$1,200 AND UNDER \$1,250.....	5.4	(1.2)	-	-	-	-	-
\$1,250 AND UNDER \$1,300.....	5.3	1.6	-	-	-	-	-
\$1,300 AND UNDER \$1,350.....	4.1	2.1	-	-	-	-	-
\$1,350 AND UNDER \$1,400.....	7.6	3.3	-	-	-	-	-
\$1,400 AND UNDER \$1,450.....	7.8	3.6	-	-	-	-	-
\$1,450 AND UNDER \$1,500.....	11.5	5.9	(0.9)	-	-	-	-
\$1,500 AND UNDER \$1,550.....	11.3	6.1	2.1	-	-	-	-
\$1,550 AND UNDER \$1,600.....	9.1	7.0	2.0	-	-	-	-
\$1,600 AND UNDER \$1,650.....	5.1	8.8	1.6	-	-	-	-
\$1,650 AND UNDER \$1,700.....	3.4	6.7	3.6	-	-	-	-
\$1,700 AND UNDER \$1,750.....	3.4	7.4	2.9	-	-	-	-
\$1,750 AND UNDER \$1,800.....	4.4	6.8	2.9	(0.7)	-	-	-
\$1,800 AND UNDER \$1,850.....	2.7	5.3	5.1	1.0	-	-	-
\$1,850 AND UNDER \$1,900.....	3.3	6.1	3.8	.4	-	-	-
\$1,900 AND UNDER \$1,950.....	1.9	5.3	6.7	1.1	-	-	-
\$1,950 AND UNDER \$2,000.....	1.8	3.8	6.0	2.0	-	-	-
\$2,000 AND UNDER \$2,050.....	(2.7)	3.1	5.6	2.0	-	-	-
\$2,050 AND UNDER \$2,100.....	-	3.1	7.8	1.3	-	-	-
\$2,100 AND UNDER \$2,150.....	-	2.5	6.1	2.3	-	-	-
\$2,150 AND UNDER \$2,200.....	-	2.2	6.1	3.7	-	-	-
\$2,200 AND UNDER \$2,250.....	-	1.7	4.5	4.2	-	-	-
\$2,250 AND UNDER \$2,300.....	-	2.0	4.8	5.0	(3.0)	-	-
\$2,300 AND UNDER \$2,350.....	-	1.1	4.7	4.4	1.6	-	-
\$2,350 AND UNDER \$2,400.....	-	1.6	3.0	6.3	1.3	-	-
\$2,400 AND UNDER \$2,450.....	-	(1.6)	3.7	3.8	2.5	-	-
\$2,450 AND UNDER \$2,500.....	-	-	3.3	6.4	2.1	(0.7)	-
\$2,500 AND UNDER \$2,600.....	-	-	4.1	11.8	5.1	4.1	-
\$2,600 AND UNDER \$2,700.....	-	-	2.9	10.7	7.1	1.0	-
\$2,700 AND UNDER \$2,800.....	-	-	2.5	9.9	8.0	2.0	-
\$2,800 AND UNDER \$2,900.....	-	-	1.5	6.0	8.1	2.2	-
\$2,900 AND UNDER \$3,000.....	-	-	(1.7)	5.3	8.8	5.9	-
\$3,000 AND UNDER \$3,100.....	-	-	-	4.5	7.7	4.8	-
\$3,100 AND UNDER \$3,200.....	-	-	-	2.1	8.7	14.7	(1.1)
\$3,200 AND UNDER \$3,300.....	-	-	-	1.7	10.0	11.5	1.5
\$3,300 AND UNDER \$3,400.....	-	-	-	1.0	6.7	5.8	3.3
\$3,400 AND UNDER \$3,500.....	-	-	-	(2.5)	5.4	9.7	1.7
\$3,500 AND UNDER \$3,600.....	-	-	-	-	2.7	6.6	4.0
\$3,600 AND UNDER \$3,700.....	-	-	-	-	2.6	5.4	22.2
\$3,700 AND UNDER \$3,800.....	-	-	-	-	2.3	5.1	7.6
\$3,800 AND UNDER \$3,900.....	-	-	-	-	1.6	3.7	6.4
\$3,900 AND UNDER \$4,000.....	-	-	-	-	.9	4.0	8.8
\$4,000 AND UNDER \$4,100.....	-	-	-	-	1.2	3.7	8.8
\$4,100 AND UNDER \$4,200.....	-	-	-	-	(2.7)	2.9	7.6
\$4,200 AND UNDER \$4,300.....	-	-	-	-	-	1.4	5.5
\$4,300 AND UNDER \$4,400.....	-	-	-	-	-	1.1	2.0
\$4,400 AND UNDER \$4,500.....	-	-	-	-	-	1.4	2.2
\$4,500 AND UNDER \$4,600.....	-	-	-	-	-	(5.2)	2.8
\$4,600 AND UNDER \$4,700.....	-	-	-	-	-	-	2.2
\$4,700 AND UNDER \$4,800.....	-	-	-	-	-	-	.4
\$4,800 AND UNDER \$4,900.....	-	-	-	-	-	-	1.9
\$4,900 AND UNDER \$5,000.....	-	-	-	-	-	-	.4
\$5,000 AND UNDER \$5,100.....	-	-	-	-	-	-	2.2
\$5,100 AND UNDER \$5,200.....	-	-	-	-	-	-	.9
\$5,200 AND UNDER \$5,300.....	-	-	-	-	-	-	.9
\$5,300 AND UNDER \$5,400.....	-	-	-	-	-	-	.4
\$5,400 AND UNDER \$5,500.....	-	-	-	-	-	-	.5
\$5,500 AND UNDER \$5,600.....	-	-	-	-	-	-	1.1
\$5,600 AND OVER.....	-	-	-	-	-	-	3.6
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	3,491	6,131	11,686	11,221	8,708	3,788	1,622
AVERAGE MONTHLY SALARY.....	\$1,508	\$1,757	\$2,120	\$2,567	\$3,055	\$3,493	\$4,070

See footnotes at end of table.

**Table 4. Continued—Employment distribution by salary: Professional and administrative occupations**

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,<sup>1</sup> March 1963)

MONTHLY SALARY	ENGINEERS							
	I	II	III	IV	V	VI	VII	VIII
UNDER \$1,300.....	0.9	-	-	-	-	-	-	-
\$1,300 AND UNDER \$1,350.....	1.6	-	-	-	-	-	-	-
\$1,350 AND UNDER \$1,400.....	.9	-	-	-	-	-	-	-
\$1,400 AND UNDER \$1,450.....	1.4	-	-	-	-	-	-	-
\$1,450 AND UNDER \$1,500.....	2.0	(2.0)	-	-	-	-	-	-
\$1,500 AND UNDER \$1,550.....	3.5	1.6	-	-	-	-	-	-
\$1,550 AND UNDER \$1,600.....	3.3	1.5	-	-	-	-	-	-
\$1,600 AND UNDER \$1,650.....	-	-	(1.2)	-	-	-	-	-
\$1,650 AND UNDER \$1,700.....	-	-	1.0	-	-	-	-	-
\$1,700 AND UNDER \$1,750.....	10.5	5.3	1.2	-	-	-	-	-
\$1,750 AND UNDER \$1,800.....	9.7	6.8	2.0	-	-	-	-	-
\$1,800 AND UNDER \$1,850.....	13.4	8.3	3.6	-	-	-	-	-
\$1,850 AND UNDER \$1,900.....	9.7	8.3	3.3	-	-	-	-	-
\$1,900 AND UNDER \$1,950.....	7.9	9.4	4.9	-	-	-	-	-
\$1,950 AND UNDER \$2,000.....	6.6	8.9	6.1	(2.9)	-	-	-	-
\$2,000 AND UNDER \$2,050.....	3.7	8.0	6.2	1.1	-	-	-	-
\$2,050 AND UNDER \$2,100.....	3.4	7.1	6.6	1.7	-	-	-	-
\$2,100 AND UNDER \$2,150.....	2.9	5.1	6.9	2.1	-	-	-	-
\$2,150 AND UNDER \$2,200.....	1.6	4.6	7.2	3.2	-	-	-	-
\$2,200 AND UNDER \$2,250.....	1.3	4.3	7.0	3.5	-	-	-	-
\$2,250 AND UNDER \$2,300.....	(2.7)	3.3	6.2	4.6	-	-	-	-
\$2,300 AND UNDER \$2,350.....	-	2.5	5.7	5.0	(4.0)	-	-	-
\$2,350 AND UNDER \$2,400.....	-	2.1	4.4	4.7	1.0	-	-	-
\$2,400 AND UNDER \$2,450.....	-	1.2	4.5	5.0	1.4	-	-	-
\$2,450 AND UNDER \$2,500.....	-	.9	3.7	6.0	1.8	-	-	-
\$2,500 AND UNDER \$2,600.....	-	1.5	6.0	11.3	4.4	-	-	-
\$2,600 AND UNDER \$2,700.....	-	(1.4)	4.9	10.6	6.5	(1.7)	-	-
\$2,700 AND UNDER \$2,800.....	-	-	3.5	9.4	8.3	1.6	-	-
\$2,800 AND UNDER \$2,900.....	-	-	1.6	7.7	9.1	2.9	-	-
\$2,900 AND UNDER \$3,000.....	-	-	1.2	6.5	10.4	4.2	-	-
\$3,000 AND UNDER \$3,100.....	-	-	(1.3)	5.5	8.7	5.9	(2.1)	-
\$3,100 AND UNDER \$3,200.....	-	-	-	3.7	8.8	6.9	1.1	-
\$3,200 AND UNDER \$3,300.....	-	-	-	2.5	7.9	8.4	2.3	-
\$3,300 AND UNDER \$3,400.....	-	-	-	1.0	6.9	9.2	3.5	(0.8)
\$3,400 AND UNDER \$3,500.....	-	-	-	(1.9)	5.9	8.9	3.8	2.1
\$3,500 AND UNDER \$3,600.....	-	-	-	-	4.2	8.3	5.7	1.2
\$3,600 AND UNDER \$3,700.....	-	-	-	-	3.9	8.4	5.8	3.4
\$3,700 AND UNDER \$3,800.....	-	-	-	-	2.3	7.2	6.5	1.9
\$3,800 AND UNDER \$3,900.....	-	-	-	-	1.3	6.0	6.8	1.7
\$3,900 AND UNDER \$4,000.....	-	-	-	-	(3.0)	4.7	7.0	2.8
\$4,000 AND UNDER \$4,100.....	-	-	-	-	-	3.6	8.2	3.4
\$4,100 AND UNDER \$4,200.....	-	-	-	-	-	3.0	8.2	4.3
\$4,200 AND UNDER \$4,300.....	-	-	-	-	-	2.1	6.4	3.8
\$4,300 AND UNDER \$4,400.....	-	-	-	-	-	1.7	6.0	6.1
\$4,400 AND UNDER \$4,500.....	-	-	-	-	-	1.5	5.3	7.4
\$4,500 AND UNDER \$4,600.....	-	-	-	-	-	1.2	4.9	6.5
\$4,600 AND UNDER \$4,700.....	-	-	-	-	-	(2.7)	2.8	8.8
\$4,700 AND UNDER \$4,800.....	-	-	-	-	-	-	2.6	5.7
\$4,800 AND UNDER \$4,900.....	-	-	-	-	-	-	2.3	4.9
\$4,900 AND UNDER \$5,000.....	-	-	-	-	-	-	1.8	4.1
\$5,000 AND UNDER \$5,100.....	-	-	-	-	-	-	1.7	4.3
\$5,100 AND UNDER \$5,200.....	-	-	-	-	-	-	1.0	4.7
\$5,200 AND UNDER \$5,300.....	-	-	-	-	-	-	(4.3)	2.8
\$5,300 AND UNDER \$5,400.....	-	-	-	-	-	-	-	2.4
\$5,400 AND UNDER \$5,500.....	-	-	-	-	-	-	-	3.5
\$5,500 AND UNDER \$5,600.....	-	-	-	-	-	-	-	2.8
\$5,600 AND UNDER \$5,700.....	-	-	-	-	-	-	-	1.5
\$5,700 AND UNDER \$5,800.....	-	-	-	-	-	-	-	.7
\$5,800 AND UNDER \$5,900.....	-	-	-	-	-	-	-	2.2
\$5,900 AND UNDER \$6,000.....	-	-	-	-	-	-	-	.5
\$6,000 AND UNDER \$6,100.....	-	-	-	-	-	-	-	.6
\$6,100 AND UNDER \$6,200.....	-	-	-	-	-	-	-	1.1
\$6,200 AND OVER.....	-	-	-	-	-	-	-	3.7
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	28,233	48,312	108,063	134,180	97,379	45,433	14,450	2,785
AVERAGE MONTHLY SALARY.....	\$1,809	\$1,972	\$2,229	\$2,613	\$3,060	\$3,552	\$4,107	\$4,736

<sup>1</sup> For scope of study, see table A-1 in appendix A.

Note: To avoid showing small proportions of employees scattered at or near the extremes of the distributions for some occupations, the percentages of employees in these intervals have

been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses. Because of rounding, sums of individual items may not equal 100.

**Table 5. Employment distribution by salary: Technical support occupations**

(Percent distribution of employees in selected technical support occupations by monthly salary, United States, except Alaska and Hawaii,<sup>1</sup> March 1981)

MONTHLY SALARY	ENGINEERING TECHNICIANS					DRAFTERS				
	I	II	III	IV	V	I	II	III	IV	V
UNDER \$675.....	-	-	-	-	-	1.6	-	-	-	-
\$675 AND UNDER \$700.....	-	-	-	-	-	1.8	-	-	-	-
\$700 AND UNDER \$725.....	-	-	-	-	-	.4	(0.6)	-	-	-
\$725 AND UNDER \$750.....	-	-	-	-	-	.3	1.0	-	-	-
\$750 AND UNDER \$775.....	-	-	-	-	-	5.3	.6	-	-	-
\$775 AND UNDER \$800.....	-	-	-	-	-	9.8	1.8	-	-	-
\$800 AND UNDER \$825.....	-	-	-	-	-	5.4	1.9	-	-	-
\$825 AND UNDER \$850.....	(2.5)	-	-	-	-	8.5	1.9	-	-	-
\$850 AND UNDER \$875.....	2.0	-	-	-	-	8.1	3.2	-	-	-
\$875 AND UNDER \$900.....	1.8	-	-	-	-	9.4	3.6	-	-	-
\$900 AND UNDER \$925.....	4.3	-	-	-	-	8.5	4.9	(2.8)	-	-
\$925 AND UNDER \$950.....	3.7	(2.4)	-	-	-	4.7	4.4	1.1	-	-
\$950 AND UNDER \$975.....	7.5	1.5	-	-	-	9.6	7.8	1.4	-	-
\$975 AND UNDER \$1,000.....	6.1	1.6	-	-	-	7.5	5.1	1.4	-	-
\$1,000 AND UNDER \$1,050.....	1 -	4.7	-	-	-	6.7	12.8	4.8	-	-
\$1,050 AND UNDER \$1,100.....	11.0	5.4	(1.2)	-	-	3.3	11.0	5.1	(1.3)	-
\$1,100 AND UNDER \$1,150.....	9.6	8.0	1.5	-	-	2.1	9.7	8.2	1.5	-
\$1,150 AND UNDER \$1,200.....	9.7	9.8	3.0	-	-	1.8	7.5	10.0	2.7	-
\$1,200 AND UNDER \$1,250.....	8.6	9.6	4.3	-	-	1.7	6.0	11.5	2.9	-
\$1,250 AND UNDER \$1,300.....	5.1	8.3	7.4	-	-	1.1	4.4	8.6	3.3	-
\$1,300 AND UNDER \$1,350.....	6.3	11.3	10.0	(1.9)	-	1.3	3.4	9.4	5.0	(1.6)
\$1,350 AND UNDER \$1,400.....	3.2	8.9	7.6	2.1	-	(1.1)	3.9	8.5	6.0	1.7
\$1,400 AND UNDER \$1,450.....	1.5	6.4	9.7	2.7	-	-	1.5	4.9	7.8	1.6
\$1,450 AND UNDER \$1,500.....	1.5	5.5	7.6	3.8	-	-	(3.0)	4.2	6.4	1.4
\$1,500 AND UNDER \$1,550.....	.6	3.5	7.2	5.9	(1.6)	-	-	4.5	7.7	3.2
\$1,550 AND UNDER \$1,600.....	.5	3.1	6.5	6.0	1.4	-	-	3.3	8.9	4.2
\$1,600 AND UNDER \$1,650.....	1.1	1.7	6.4	5.8	2.2	-	-	2.9	6.3	3.9
\$1,650 AND UNDER \$1,700.....	.3	2.4	4.4	9.9	2.8	-	-	1.9	6.9	4.6
\$1,700 AND UNDER \$1,750.....	.5	1.5	3.4	8.2	3.5	-	-	1.1	5.6	5.6
\$1,750 AND UNDER \$1,800.....	1.5	1.1	3.2	9.4	5.6	-	-	.6	5.2	5.7
\$1,800 AND UNDER \$1,850.....	(0.9)	1.2	3.3	6.8	5.9	-	-	1.1	3.7	4.0
\$1,850 AND UNDER \$1,900.....	-	(2.0)	3.9	5.9	8.9	-	-	(2.6)	3.5	4.7
\$1,900 AND UNDER \$1,950.....	-	-	3.4	5.5	8.3	-	-	-	3.4	5.7
\$1,950 AND UNDER \$2,000.....	-	-	2.0	4.6	6.6	-	-	-	1.8	5.6
\$2,000 AND UNDER \$2,050.....	-	-	1.4	4.3	7.0	-	-	-	1.9	5.5
\$2,050 AND UNDER \$2,100.....	-	-	(2.5)	3.7	7.5	-	-	-	1.4	4.2
\$2,100 AND UNDER \$2,150.....	-	-	-	3.7	5.8	-	-	-	2.7	5.8
\$2,150 AND UNDER \$2,200.....	-	-	-	2.4	5.2	-	-	-	(4.0)	3.5
\$2,200 AND UNDER \$2,250.....	-	-	-	2.2	5.3	-	-	-	-	2.8
\$2,250 AND UNDER \$2,300.....	-	-	-	1.5	3.9	-	-	-	-	3.0
\$2,300 AND UNDER \$2,350.....	-	-	-	1.1	3.8	-	-	-	-	3.2
\$2,350 AND UNDER \$2,400.....	-	-	-	(2.7)	3.5	-	-	-	-	1.7
\$2,400 AND UNDER \$2,450.....	-	-	-	-	2.3	-	-	-	-	1.8
\$2,450 AND UNDER \$2,500.....	-	-	-	-	3.1	-	-	-	-	1.9
\$2,500 AND UNDER \$2,600.....	-	-	-	-	3.8	-	-	-	-	3.1
\$2,600 AND UNDER \$2,700.....	-	-	-	-	(2.0)	-	-	-	-	3.9
\$2,700 AND UNDER \$2,800.....	-	-	-	-	-	-	-	-	-	1.6
\$2,800 AND UNDER \$2,900.....	-	-	-	-	-	-	-	-	-	1.7
\$2,900 AND UNDER \$3,000.....	-	-	-	-	-	-	-	-	-	2.6
\$3,000 AND OVER.....	-	-	-	-	-	-	-	-	-	(2/)
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYERS.....	5,898	18,803	31,017	35,540	19,056	2,854	12,494	24,399	26,580	20,034
AVERAGE MONTHLY SALARY.....	\$1,137	\$1,307	\$1,527	\$1,803	\$2,051	\$923	\$1,075	\$1,301	\$1,611	\$2,011

See footnotes at end of table.

**Table 5. Continued—Employment distribution by salary: Technical support occupations**

(Percent distribution of employees in selected technical support occupations by monthly salary, United States, except Alaska and Hawaii,<sup>1</sup> March 1981)

MONTHLY SALARY	COMPUTER OPERATORS					PHOTOGRAPHERS		
	I	II	III	IV	V	II	III	IV
UNDER \$625.....	0.8	-	-	-	-	-	-	-
\$625 AND UNDER \$650.....	1.7	-	-	-	-	-	-	-
\$650 AND UNDER \$675.....	2.5	-	-	-	-	-	-	-
\$675 AND UNDER \$700.....	2.3	-	-	-	-	-	-	-
\$700 AND UNDER \$725.....	3.6	-	-	-	-	-	-	-
\$725 AND UNDER \$750.....	2.6	(2.2)	-	-	-	-	-	-
\$750 AND UNDER \$775.....	3.4	1.5	-	-	-	-	-	-
\$775 AND UNDER \$800.....	6.8	1.9	-	-	-	0.4	-	-
\$800 AND UNDER \$825.....	8.1	3.1	(1.9)	-	-	3.8	-	-
\$825 AND UNDER \$850.....	6.9	3.1	1.0	-	-	-	-	-
\$850 AND UNDER \$875.....	7.1	6.2	1.2	-	-	2.5	-	-
\$875 AND UNDER \$900.....	9.0	4.6	1.4	-	-	-	-	-
\$900 AND UNDER \$925.....	6.7	5.5	3.5	-	-	.2	-	-
\$925 AND UNDER \$950.....	4.9	5.7	2.1	-	-	1.1	-	-
\$950 AND UNDER \$975.....	5.6	7.2	3.7	-	-	.8	-	-
\$975 AND UNDER \$1,000.....	4.2	7.2	3.6	(1.9)	-	.8	-	-
\$1,000 AND UNDER \$1,050.....	6.1	11.6	8.4	1.6	-	5.9	-	-
\$1,050 AND UNDER \$1,100.....	6.6	8.9	8.2	2.3	(2/)	1.9	-	-
\$1,100 AND UNDER \$1,150.....	4.4	7.6	8.5	4.1	1.0	5.9	-	-
\$1,150 AND UNDER \$1,200.....	1.7	4.9	9.7	4.6	1.4	2.8	(1.6)	-
\$1,200 AND UNDER \$1,250.....	1.9	2.7	8.9	8.5	1.6	7.2	1.3	1.3
\$1,250 AND UNDER \$1,300.....	1.1	2.3	7.2	8.0	2.7	4.4	1.6	-
\$1,300 AND UNDER \$1,350.....	(2.0)	2.3	6.5	8.2	5.6	6.6	5.9	2.4
\$1,350 AND UNDER \$1,400.....	-	5.3	5.5	6.6	4.2	2.7	5.6	3.3
\$1,400 AND UNDER \$1,450.....	-	2.6	4.4	7.2	6.3	4.4	3.2	3.8
\$1,450 AND UNDER \$1,500.....	-	1.4	2.4	6.9	4.2	8.5	3.0	3.8
\$1,500 AND UNDER \$1,550.....	-	(2.2)	2.2	5.9	4.5	3.8	8.6	2.0
\$1,550 AND UNDER \$1,600.....	-	-	1.8	6.4	6.0	8.7	12.8	3.8
\$1,600 AND UNDER \$1,650.....	-	-	.9	5.4	10.1	2.8	3.9	3.3
\$1,650 AND UNDER \$1,700.....	-	-	1.0	4.5	4.2	2.7	4.3	3.3
\$1,700 AND UNDER \$1,750.....	-	-	(5.8)	2.2	6.3	4.9	8.5	6.9
\$1,750 AND UNDER \$1,800.....	-	-	-	2.3	4.3	4.5	7.7	4.0
\$1,800 AND UNDER \$1,850.....	-	-	-	2.0	5.1	1.9	1.6	5.1
\$1,850 AND UNDER \$1,900.....	-	-	-	1.4	3.6	.8	5.2	5.1
\$1,900 AND UNDER \$1,950.....	-	-	-	1.8	8.6	6.1	6.9	7.6
\$1,950 AND UNDER \$2,000.....	-	-	-	2.0	2.5	(4.2)	4.0	6.9
\$2,000 AND UNDER \$2,050.....	-	-	-	1.1	1.4	-	1.0	3.8
\$2,050 AND UNDER \$2,100.....	-	-	-	.7	3.9	-	3.9	2.7
\$2,100 AND UNDER \$2,150.....	-	-	-	.7	1.3	-	2.1	2.9
\$2,150 AND UNDER \$2,200.....	-	-	-	.6	1.3	-	2.7	4.0
\$2,200 AND UNDER \$2,250.....	-	-	-	.7	1.3	-	1.7	4.9
\$2,250 AND UNDER \$2,300.....	-	-	-	.4	1.0	-	.3	.2
\$2,300 AND UNDER \$2,350.....	-	-	-	.3	1.2	-	.3	2.0
\$2,350 AND UNDER \$2,400.....	-	-	-	.7	1.0	-	.4	.9
\$2,400 AND UNDER \$2,450.....	-	-	-	1.0	.7	-	1.6	3.3
\$2,450 AND UNDER \$2,500.....	-	-	-	(2/)	.8	-	(0.6)	3.1
\$2,500 AND UNDER \$2,600.....	-	-	-	-	1.7	-	-	4.4
\$2,600 AND UNDER \$2,700.....	-	-	-	-	2.2	-	-	5.1
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	6,135	12,849	29,299	16,671	3,545	528	698	450
AVERAGE MONTHLY SALARY.....	\$906	\$1,049	\$1,220	\$1,475	\$1,733	\$1,425	\$1,704	\$1,932

<sup>1</sup> For scope of study, see table A-1 in appendix A.

<sup>2</sup> Less than 0.05 percent.

Note: To avoid showing small proportions of employees scattered at or near the extremes of

the distributions for some occupations, the percentages of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses. Because of rounding, sums of individual items may not equal 100.

**Table 6. Employment distribution by salary: Clerical occupations**

(Percent distribution of employees in selected clerical occupations by monthly salary, United States, except Alaska and Hawaii,<sup>1</sup> March 1981)

MONTHLY SALARY	ACCOUNTING CLERKS				FILE CLERKS			KEY ENTRY OPERATORS	
	I	II	III	IV	I	II	III	I	II
\$500 AND UNDER \$525.....	0.9	-	-	-	0.2	-	-	-	-
\$525 AND UNDER \$550.....	1.0	-	-	-	2.2	-	-	-	-
\$550 AND UNDER \$575.....	.6	-	-	-	3.6	0.2	-	(0.4)	-
\$575 AND UNDER \$600.....	2.5	-	-	-	12.0	2.3	-	3.8	-
\$600 AND UNDER \$625.....	5.2	(1.2)	-	-	12.8	4.6	-	2.6	-
\$625 AND UNDER \$650.....	3.7	1.1	-	-	9.5	5.4	(0.8)	1.9	-
\$650 AND UNDER \$675.....	8.2	1.7	-	-	11.1	7.3	1.6	3.8	-
\$675 AND UNDER \$700.....	8.2	.6	-	-	9.2	10.0	1.5	5.1	(0.9)
\$700 AND UNDER \$725.....	7.3	3.3	-	-	6.7	7.1	4.2	4.0	1.0
\$725 AND UNDER \$750.....	8.8	4.7	(1.9)	-	5.7	8.5	4.1	5.6	2.3
\$750 AND UNDER \$775.....	6.9	4.2	1.6	-	5.2	8.5	4.9	5.4	2.3
\$775 AND UNDER \$800.....	8.1	5.0	1.7	-	3.7	7.2	5.8	6.7	3.5
\$800 AND UNDER \$825.....	6.4	5.3	1.9	-	3.5	5.0	8.9	6.3	2.8
\$825 AND UNDER \$850.....	6.3	6.0	2.7	-	2.8	4.8	6.1	6.4	4.1
\$850 AND UNDER \$875.....	4.8	6.7	3.9	-	3.3	4.9	6.8	6.7	4.5
\$875 AND UNDER \$900.....	3.4	5.6	3.6	-	2.1	2.2	3.3	5.2	4.2
\$900 AND UNDER \$925.....	2.2	5.2	4.0	(2.6)	1.3	4.8	5.7	4.8	4.8
\$925 AND UNDER \$950.....	1.7	5.7	4.0	1.1	.9	2.7	3.7	3.2	4.8
\$950 AND UNDER \$975.....	2.3	5.8	5.1	1.6	1.4	1.6	5.4	3.0	5.3
\$975 AND UNDER \$1,000.....	1.5	4.9	5.2	1.4	(2.9)	1.0	1.7	2.8	4.3
\$1,000 AND UNDER \$1,050.....	2.0	7.9	9.4	4.4	-	2.3	7.5	5.2	9.2
\$1,050 AND UNDER \$1,100.....	1.9	5.4	9.1	6.2	-	1.1	5.8	3.7	8.6
\$1,100 AND UNDER \$1,150.....	1.2	3.6	9.2	5.0	-	.8	4.4	2.6	6.1
\$1,150 AND UNDER \$1,200.....	1.1	3.0	6.5	5.0	-	1.2	3.3	2.9	5.6
\$1,200 AND UNDER \$1,250.....	(3.8)	2.0	5.5	6.5	-	(6.5)	2.4	1.3	5.1
\$1,250 AND UNDER \$1,300.....	-	1.3	4.3	6.6	-	-	3.1	1.1	4.3
\$1,300 AND UNDER \$1,350.....	-	1.4	3.9	9.1	-	-	.8	(5.5)	3.0
\$1,350 AND UNDER \$1,400.....	-	1.6	3.5	6.9	-	-	1.4	-	2.0
\$1,400 AND UNDER \$1,450.....	-	1.4	3.5	6.9	-	-	.9	-	2.1
\$1,450 AND UNDER \$1,500.....	-	(3.4)	2.1	4.3	-	-	.7	-	1.2
\$1,500 AND UNDER \$1,550.....	-	-	1.4	4.2	-	-	.7	-	.9
\$1,550 AND UNDER \$1,600.....	-	-	1.0	2.7	-	-	.5	-	.8
\$1,600 AND UNDER \$1,650.....	-	-	1.0	3.1	-	-	.5	-	.9
\$1,650 AND UNDER \$1,700.....	-	-	.6	4.2	-	-	.6	-	1.7
\$1,700 AND UNDER \$1,750.....	-	-	.7	4.0	-	-	1.0	-	1.1
\$1,750 AND UNDER \$1,800.....	-	-	1.1	2.6	-	-	1.2	-	(2.6)
\$1,800 AND UNDER \$1,850.....	-	-	(1.8)	2.0	-	-	(0.8)	-	-
\$1,850 AND UNDER \$1,900.....	-	-	-	1.5	-	-	-	-	-
\$1,900 AND UNDER \$1,950.....	-	-	-	1.0	-	-	-	-	-
\$1,950 AND UNDER \$2,000.....	-	-	-	.9	-	-	-	-	-
\$2,000 AND UNDER \$2,050.....	-	-	-	1.8	-	-	-	-	-
\$2,050 AND UNDER \$2,100.....	-	-	-	1.4	-	-	-	-	-
\$2,100 AND UNDER \$2,150.....	-	-	-	.6	-	-	-	-	-
\$2,150 AND UNDER \$2,200.....	-	-	-	.5	-	-	-	-	-
\$2,200 AND UNDER \$2,250.....	-	-	-	.7	-	-	-	-	-
\$2,250 AND UNDER \$2,300.....	-	-	-	1.3	-	-	-	-	-
\$2,300 AND OVER.....	-	-	-	.1	-	-	-	-	-
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	30,466	86,720	59,797	23,179	27,925	11,773	3,833	68,883	41,251
AVERAGE MONTHLY SALARY.....	\$798	\$953	\$1,121	\$1,407	\$702	\$820	\$974	\$886	\$1,079

See footnotes at end of table.

**Table 6. Continued—Employment distribution by salary: Clerical occupations**

(Percent distribution of employees in selected clerical occupations by monthly salary, United States, except Alaska and Hawaii,<sup>1</sup> March 1981)

MONTHLY SALARY	MESSENGERS	PERSONNEL CLERKS/ASSISTANTS					PURCHASING ASSISTANTS		
		I	II	III	IV	V	I	II	III
UNDER \$550.....	1.0	-	-	-	-	-	-	-	-
\$550 AND UNDER \$575.....	3.2	-	-	-	-	-	-	-	-
\$575 AND UNDER \$600.....	6.5	-	-	-	-	-	-	-	-
\$600 AND UNDER \$625.....	6.2	-	-	-	-	-	-	-	-
\$625 AND UNDER \$650.....	6.4	(1.4)	-	-	-	-	-	-	-
\$650 AND UNDER \$675.....	9.2	1.5	-	-	-	-	-	-	-
\$675 AND UNDER \$700.....	8.6	6.1	-	-	-	-	(0.6)	-	-
\$700 AND UNDER \$725.....	7.5	6.2	-	-	-	-	3.0	-	-
\$725 AND UNDER \$750.....	6.7	3.9	(1.9)	-	-	-	2.6	-	-
\$750 AND UNDER \$775.....	6.3	4.5	1.6	(0.9)	1.2	-	1.7	-	-
\$775 AND UNDER \$800.....	5.4	4.3	1.7	1.0	-	-	2.7	-	-
\$800 AND UNDER \$825.....	3.9	6.7	3.0	.4	-	-	5.5	-	-
\$825 AND UNDER \$850.....	2.9	10.6	3.5	1.1	-	-	5.6	(0.9)	-
\$850 AND UNDER \$875.....	5.4	8.8	4.2	.7	1.9	-	6.6	1.3	-
\$875 AND UNDER \$900.....	2.4	4.1	6.1	2.0	.1	-	3.5	2.1	-
\$900 AND UNDER \$925.....	2.4	9.0	8.0	1.5	.1	-	6.2	1.8	-
\$925 AND UNDER \$950.....	2.2	3.6	4.7	2.7	.5	-	8.9	1.3	-
\$950 AND UNDER \$975.....	1.3	6.4	7.7	4.3	1.7	-	6.2	4.7	-
\$975 AND UNDER \$1,000.....	1.3	1.7	7.3	3.6	.9	-	7.0	2.8	(0.2)
\$1,000 AND UNDER \$1,050.....	2.7	9.2	10.4	9.7	.8	-	8.0	7.0	1.2
\$1,050 AND UNDER \$1,100.....	1.4	1.6	8.6	1-	2.6	-	11.5	9.2	.3
\$1,100 AND UNDER \$1,150.....	1.7	1.8	6.4	10.3	6.1	-	4.1	8.9	1.0
\$1,150 AND UNDER \$1,200.....	1.1	2.5	3.7	11.3	9.2	(0.7)	4.2	9.4	2.6
\$1,200 AND UNDER \$1,250.....	1.1	1.2	4.9	9.7	9.4	1.7	2.2	8.5	2.9
\$1,250 AND UNDER \$1,300.....	(3.4)	1.6	2.9	5.5	9.4	1.0	1.8	5.6	4.4
\$1,300 AND UNDER \$1,350.....	-	(3.3)	3.3	3.4	13.6	7.9	1.0	4.6	7.5
\$1,350 AND UNDER \$1,400.....	-	-	1.9	4.9	7.9	3.6	1.5	5.9	6.0
\$1,400 AND UNDER \$1,450.....	-	-	1.3	3.8	4.5	3.1	.8	2.6	9.5
\$1,450 AND UNDER \$1,500.....	-	-	1.2	3.0	3.3	7.0	.3	3.5	6.2
\$1,500 AND UNDER \$1,550.....	-	-	1.3	2.3	5.4	2.6	1.1	3.1	7.8
\$1,550 AND UNDER \$1,600.....	-	-	.6	1.9	1.6	15.9	.5	4.1	5.5
\$1,600 AND UNDER \$1,650.....	-	-	.7	1.1	2.0	2.6	.8	1.4	7.8
\$1,650 AND UNDER \$1,700.....	-	-	.5	.7	1.7	7.9	1.2	1.6	2.8
\$1,700 AND UNDER \$1,750.....	-	-	.9	2.3	.6	5.3	(1.0)	2.1	3.6
\$1,750 AND UNDER \$1,800.....	-	-	1.2	(2.0)	1.1	10.6	-	.6	3.2
\$1,800 AND UNDER \$1,850.....	-	-	(0.4)	-	1.4	13.5	-	1.7	5.4
\$1,850 AND UNDER \$1,900.....	-	-	-	-	3.4	3.8	-	(5.3)	2.8
\$1,900 AND UNDER \$1,950.....	-	-	-	-	-	1.9	-	-	1.3
\$1,950 AND UNDER \$2,000.....	-	-	-	-	-	1.9	-	-	2.5
\$2,000 AND UNDER \$2,050.....	-	-	-	-	1.7	2.9	-	-	4.5
\$2,050 AND UNDER \$2,100.....	-	-	-	-	1.3	2.4	-	-	.9
\$2,100 AND UNDER \$2,150.....	-	-	-	-	2.4	-	-	-	.2
\$2,150 AND UNDER \$2,200.....	-	-	-	-	1.2	-	-	-	.3
\$2,200 AND UNDER \$2,250.....	-	-	-	-	1.0	-	-	-	.8
\$2,250 AND UNDER \$2,300.....	-	-	-	-	.2	.2	-	-	.8
\$2,300 AND UNDER \$2,350.....	-	-	-	-	1.2	1.7	-	-	.8
\$2,350 AND UNDER \$2,400.....	-	-	-	-	-	(1.7)	-	-	1.0
\$2,400 AND UNDER \$2,450.....	-	-	-	-	-	-	-	-	.9
\$2,450 AND UNDER \$2,500.....	-	-	-	-	-	-	-	-	.7
\$2,500 AND UNDER \$2,600.....	-	-	-	-	-	-	-	-	2.6
\$2,600 AND UNDER \$2,700.....	-	-	-	-	-	-	-	-	.8
\$2,700 AND UNDER \$2,800.....	-	-	-	-	-	-	-	-	1.1
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	15,609	2,556	5,096	3,999	1,866	416	5,135	4,322	1,904
AVERAGE MONTHLY SALARY.....	\$783	\$898	\$1,058	\$1,192	\$1,400	\$1,673	\$1,002	\$1,274	\$1,641

See footnotes at end of table.

**Table 6. Continued—Employment distribution by salary: Clerical occupations**

(Percent distribution of employees in selected clerical occupations by monthly salary, United States, except Alaska and Hawaii,<sup>1</sup> March 1981)

MONTHLY SALARY	SECRETARIES					STENOGRAPHERS		TYPISTS	
	I	II	III	IV	V	I	II	I	II
UNDER \$575.....	-	-	-	-	-	-	-	0.5	-
\$575 AND UNDER \$600.....	-	-	-	-	-	-	-	2.2	-
\$600 AND UNDER \$625.....	-	-	-	-	-	-	-	3.2	-
\$625 AND UNDER \$650.....	-	-	-	-	-	-	-	4.9	(1.2)
\$650 AND UNDER \$675.....	-	-	-	-	-	-	-	6.4	1.3
\$675 AND UNDER \$700.....	(1.2)	-	-	-	-	(1.9)	-	8.1	2.8
\$700 AND UNDER \$725.....	1.0	-	-	-	-	-	-	-	-
\$725 AND UNDER \$750.....	1.8	-	-	-	-	2.9	-	8.1	2.1
\$750 AND UNDER \$775.....	2.2	(1.6)	-	-	-	2.5	(0.9)	7.7	2.7
\$775 AND UNDER \$800.....	2.6	1.6	-	-	-	2.3	1.1	7.3	3.6
\$800 AND UNDER \$825.....	2.4	1.8	-	-	-	3.8	1.5	8.1	5.5
\$825 AND UNDER \$850.....	3.6	1.9	(1.5)	-	-	3.3	1.6	5.8	4.5
\$850 AND UNDER \$875.....	5.3	2.6	1.4	-	-	3.4	1.9	5.1	5.1
\$875 AND UNDER \$900.....	3.8	2.7	1.2	-	-	4.5	1.8	5.1	5.3
\$900 AND UNDER \$925.....	5.9	3.0	1.5	-	-	3.9	1.4	2.9	4.7
\$925 AND UNDER \$950.....	4.7	3.3	1.7	(3.0)	-	3.5	2.3	3.3	4.7
\$950 AND UNDER \$975.....	5.5	3.7	2.3	1.4	-	3.9	2.2	2.2	5.0
\$975 AND UNDER \$1,000.....	5.5	4.3	2.7	1.4	(1.3)	4.3	2.0	2.1	4.3
\$1,000 AND UNDER \$1,050.....	9.2	8.4	5.9	3.6	1.0	4.1	2.0	1.6	3.4
\$1,050 AND UNDER \$1,100.....	8.7	10.0	7.5	3.8	1.5	6.7	4.1	3.6	8.0
\$1,100 AND UNDER \$1,150.....	7.8	9.6	7.7	4.6	1.4	6.8	4.3	1.9	6.2
\$1,150 AND UNDER \$1,200.....	5.9	9.5	7.9	5.6	2.6	5.7	5.5	2.0	4.0
\$1,200 AND UNDER \$1,250.....	4.9	7.4	8.1	7.6	3.2	4.1	5.5	1.4	2.9
\$1,250 AND UNDER \$1,300.....	3.0	6.6	7.4	6.6	4.2	3.8	5.0	1.4	3.1
\$1,300 AND UNDER \$1,350.....	2.2	5.8	7.8	7.1	5.4	4.2	5.4	(4.9)	3.5
\$1,350 AND UNDER \$1,400.....	1.9	4.2	5.9	6.7	5.1	5.0	3.0	-	3.0
\$1,400 AND UNDER \$1,450.....	1.5	2.9	5.0	6.7	5.1	4.2	5.7	-	1.8
\$1,450 AND UNDER \$1,500.....	1.1	2.2	4.7	6.6	5.7	3.3	8.1	-	1.8
\$1,500 AND UNDER \$1,550.....	1.6	1.4	3.2	5.6	6.5	1.5	7.7	-	1.1
\$1,550 AND UNDER \$1,600.....	1.1	.9	2.8	6.3	6.3	-	-	-	-
\$1,600 AND UNDER \$1,650.....	.9	1.1	2.3	4.1	5.8	5	3.9	-	1.3
\$1,650 AND UNDER \$1,700.....	1.0	.8	1.8	4.0	7.2	1.5	4.3	-	1.7
\$1,700 AND UNDER \$1,750.....	(3.7)	-	1.6	3.9	4.1	1.3	2.3	-	.7
\$1,750 AND UNDER \$1,800.....	-	1.0	1.1	2.3	3.8	4.0	6.0	-	1.5
\$1,800 AND UNDER \$1,850.....	-	(0.9)	1.6	2.3	3.9	2.4	2.8	-	(2.9)
\$1,850 AND UNDER \$1,900.....	-	-	1.0	1.8	4.2	(1.2)	2.0	-	-
\$1,900 AND UNDER \$1,950.....	-	-	.9	1.3	3.2	-	3.6	-	-
\$1,950 AND UNDER \$2,000.....	-	-	1.2	1.2	2.4	-	1.2	-	-
\$2,000 AND UNDER \$2,050.....	-	-	(2.3)	(2.2)	2.4	-	(0.5)	-	-
\$2,050 AND UNDER \$2,100.....	-	-	-	-	2.2	-	-	-	-
\$2,100 AND UNDER \$2,150.....	-	-	-	-	2.0	-	-	-	-
\$2,150 AND UNDER \$2,200.....	-	-	-	-	2.0	-	-	-	-
\$2,200 AND UNDER \$2,250.....	-	-	-	-	2.3	-	-	-	-
\$2,250 AND OVER.....	-	-	-	-	4.5	-	-	-	-
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	63,923	61,171	106,881	49,624	23,515	17,422	14,725	38,236	21,551
AVERAGE MONTHLY SALARY.....	\$1,079	\$1,147	\$1,298	\$1,406	\$1,635	\$1,099	\$1,311	\$830	\$1,030

<sup>1</sup> For scope of study, see table A-1 in appendix A.

NOTE: To avoid showing small proportions of employees scattered at or near the extremes of the distribution for some occupations, the percentages of employees in these intervals have

been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses. Because of rounding, sums of individual items may not equal 100.



**Table 7. Occupational employment distribution: By industry division**

(Percent distribution of employees in selected professional, administrative, technical, and clerical occupations,<sup>1</sup> by industry division,<sup>2</sup> United States, except Alaska and Hawaii, March 1981)

OCCUPATION AND LEVEL	MINING	CON- STRUCTION	MANU- FACTURING	PUBLIC UTILITIES <sup>3</sup>	WHOLESALE TRADE	RETAIL TRADE	FINANCE, INSURANCE, AND REAL ESTATE	SELECTED SERVICES <sup>4</sup>
<b>PROFESSIONAL AND ADMINISTRATIVE</b>								
ACCOUNTANTS.....	5	(5)	64	10	(5)	(5)	10	(5)
AUDITORS.....	4	(5)	40	17	(5)	5	28	(5)
PUBLIC ACCOUNTANTS.....	-	-	-	-	-	-	-	100
CHIEF ACCOUNTANTS.....	(5)	(5)	74	4	4	(5)	8	4
ATTORNEYS.....	4	(5)	33	13	(5)	(5)	41	(5)
BUYERS.....	(5)	(5)	83	5	(5)	(5)	(5)	4
JOB ANALYSTS.....	(5)	(5)	52	9	(5)	(5)	29	6
DIRECTORS OF PERSONNEL.....	4	(5)	71	(5)	(5)	4	13	(5)
CHEMISTS.....	(5)	(5)	89	(5)	(5)	-	-	8
ENGINEERS.....	(5)	(5)	73	7	(5)	(5)	(5)	15
<b>TECHNICAL SUPPORT</b>								
ENGINEERING TECHNICIANS.....	(5)	(5)	76	4	(5)	-	(5)	16
DRAFTERS.....	(5)	(5)	67	7	(5)	(5)	(5)	19
COMPUTER OPERATORS.....	(5)	(5)	42	9	7	5	23	13
PHOTOGRAPHERS.....	(5)	(5)	67	6	(5)	5	(5)	14
<b>CLERICAL</b>								
ACCOUNTING CLERKS.....	(5)	(5)	41	12	9	13	17	4
FILE CLERKS.....	(5)	(5)	15	6	6	(5)	65	(5)
KEY ENTRY OPERATORS.....	(5)	(5)	36	7	10	8	23	14
MESSENGERS.....	(5)	(5)	31	9	(5)	5	41	8
PERSONNEL CLERKS/ASSISTANTS.....	(5)	(5)	62	6	(5)	5	15	5
PURCHASING ASSISTANTS.....	(5)	(5)	82	5	(5)	(5)	4	(5)
SECRETARIES.....	(5)	(5)	48	9	5	5	22	7
STENOGRAPHERS.....	(5)	-	45	34	4	(5)	11	4
TYPISTS.....	(5)	(5)	34	9	(5)	4	41	7

<sup>1</sup> Each occupation includes the work levels shown in table 1.

<sup>2</sup> For scope of study, see table A-1 in appendix A.

<sup>3</sup> Transportation (except U.S. Postal Service), communications, electric, gas, and sanitary services.

<sup>4</sup> Limited to engineering, architectural, and surveying services; commercially operated research, development, and testing laboratories; credit reporting and collection agencies; com-

puter and data processing services; management, consulting, and public relations services; noncommercial educational, scientific, and research organizations; and accounting, auditing and bookkeeping services.

<sup>5</sup> Less than 4 percent.

NOTE: A dash indicates that no workers in the occupation were found in the industry.

**Table 8. Relative salary levels: Occupation by industry division**

(Relative salary levels for selected professional, administrative, technical, and clerical occupations,<sup>1</sup> by industry division,<sup>2</sup> United States, except Alaska and Hawaii, March 1981)

(Average salary for each occupation in all industries=100)

OCCUPATION AND LEVEL	MINING	CON- STRUCTION	MANU- FACTURING	PUBLIC UTILITIES <sup>3</sup>	WHOLESALE TRADE	RETAIL TRADE	FINANCE, INSURANCE, AND REAL ESTATE	SELECTED SERVICES <sup>4</sup>
<b>PROFESSIONAL AND ADMINISTRATIVE</b>								
ACCOUNTANTS.....	110	100	100	105	97	95	93	98
AUDITORS.....	113	109	104	107	99	94	89	101
PUBLIC ACCOUNTANTS.....	-	-	-	-	-	-	-	100
CHIEF ACCOUNTANTS.....	(5)	(5)	100	(5)	(5)	(5)	93	93
ATTORNEYS.....	116	(5)	105	101	(5)	100	93	99
BUYERS.....	117	102	99	110	107	102	101	93
JOB ANALYSTS.....	(5)	91	106	107	(5)	(5)	86	(5)
DIRECTORS OF PERSONNEL.....	118	(5)	100	117	(5)	98	94	90
CHEMISTS.....	117	(5)	100	(5)	(5)	-	-	98
ENGINEERS.....	119	103	100	102	(5)	(5)	(5)	98
<b>TECHNICAL SUPPORT</b>								
ENGINEERING TECHNICIANS.....	120	113	99	112	(5)	-	(5)	99
DRAFTERS.....	111	106	98	105	(5)	89	(5)	102
COMPUTER OPERATORS.....	113	(5)	105	114	86	(5)	91	91
PHOTOGRAPHERS.....	123	106	102	113	(5)	91	93	87
<b>CLERICAL</b>								
ACCOUNTING CLERKS.....	115	101	101	119	96	94	88	93
FILE CLERKS.....	121	107	113	123	102	98	93	103
KEY ENTRY OPERATORS.....	115	100	106	125	103	97	89	89
MESSENGERS.....	99	94	106	122	108	95	91	98
PERSONNEL CLERKS/ASSISTANTS.....	125	(5)	102	113	(5)	89	88	93
PURCHASING ASSISTANTS.....	103	90	100	111	97	91	85	94
SECRETARIES.....	112	95	103	113	100	90	90	100
STENOGRAPHERS.....	89	(5)	102	107	108	91	70	92
TYPISTS.....	113	95	108	124	105	96	86	103

<sup>1</sup> Each occupation includes the work levels shown in table 1. In computing relative salary levels for each occupation by industry division, the total employment in each work level in all industries surveyed was used as a constant employment weight to eliminate the effect of differences in the proportion of employment in various work levels within each occupation.

<sup>2</sup> For scope of study, see table A-1 in appendix A.

<sup>3</sup> Transportation (except U.S. Postal Service), communications, electric, gas, and sanitary services.

<sup>4</sup> Limited to engineering, architectural, and surveying services; commercially operated

research, development, and testing laboratories; advertising; credit reporting and collection agencies; computer and data processing services; management, consulting, and public relations services; noncommercial educational, scientific, and research organizations; and accounting, auditing, and bookkeeping services.

<sup>5</sup> Insufficient employment in 1 work level or more to warrant separate presentation of data.

NOTE: A dash indicated that no workers in the occupation were found in the industry.

**Table 9. Average weekly hours: Occupation by industry division**

(Average standard weekly hours<sup>1</sup> for employees in selected professional, administrative, technical, and clerical occupations,<sup>2</sup> by industry division,<sup>3</sup> United States, except Alaska and Hawaii, March 1981)

OCCUPATION AND LEVEL	MINING	CON- STRUCTION	HAND- FACTURING	PUBLIC UTILITIES <sup>4</sup>	WHOLESALE TRADE	RETAIL TRADE	FINANCE, INSURANCE AND REAL ESTATE	SELECTED SERVICES <sup>5</sup>
<b>PROFESSIONAL AND ADMINISTRATIVE</b>								
ACCOUNTANTS.....	40.0	40.0	39.5	39.5	40.0	39.0	38.0	39.5
AUDITORS.....	40.0	40.0	39.0	39.5	40.0	38.5	38.0	39.0
PUBLIC ACCOUNTANTS.....	-	-	-	-	-	-	-	39.5
CHIEF ACCOUNTANTS.....	(6)	(6)	39.5	(6)	(6)	(6)	39.0	40.0
ATTORNEYS.....	40.0	(6)	39.0	39.5	(6)	38.0	38.0	39.5
BUYERS.....	39.5	40.0	40.0	39.5	39.5	38.5	38.0	39.5
JOB ANALYSTS.....	(6)	40.0	40.0	39.5	(6)	(6)	38.0	(6)
DIRECTORS OF PERSONNEL.....	40.0	(6)	40.0	40.0	(6)	40.0	38.5	39.5
CHEMISTS.....	40.0	(6)	39.5	(6)	(6)	-	-	40.0
ENGINEERS.....	40.0	40.0	40.0	40.0	(6)	(6)	(6)	39.5
<b>TECHNICAL SUPPORT</b>								
ENGINEERING TECHNICIANS.....	40.0	40.0	40.0	40.0	(6)	-	(6)	39.5
DRAFTERS.....	40.0	40.0	40.0	39.5	(6)	37.5	(6)	40.0
COMPUTER OPERATORS.....	40.0	(6)	39.5	39.0	39.5	(6)	38.0	39.5
PHOTOGRAPHERS.....	40.0	40.0	40.0	39.5	(6)	38.5	37.5	39.5
<b>CLERICAL</b>								
ACCOUNTING CLERKS.....	40.0	39.5	39.5	39.5	39.5	39.0	38.0	39.5
FILE CLERKS.....	40.0	40.0	39.5	39.5	40.0	39.0	38.0	39.0
KEY ENTRY OPERATORS.....	40.0	40.0	39.5	39.5	40.0	39.0	38.0	39.5
MESSENGERS.....	40.0	40.0	38.5	39.0	39.5	38.5	37.5	38.0
PERSONNEL CLERKS/ASSISTANTS.....	40.0	(6)	40.0	39.5	(6)	39.5	38.0	39.5
PURCHASING ASSISTANTS.....	39.5	39.5	39.5	40.0	39.5	39.0	38.0	39.5
SECRETARIES.....	39.5	40.0	39.5	39.5	39.5	38.5	38.0	39.0
STENOGRAPHERS.....	40.0	(6)	40.0	39.5	39.5	39.5	37.5	39.0
TYPISTS.....	40.0	40.0	39.5	39.5	40.0	39.0	37.0	39.0

<sup>1</sup> Based on standard workweek for which employees receive their regular straight-time salary. If standard hours were not available, the standard hours applicable for a majority of the office work force in the establishment were used. The average for each job category was rounded to the nearest half hour.

<sup>2</sup> Each occupation includes the work levels shown in table 1.

<sup>3</sup> For scope of study, see table A-1 in appendix A.

<sup>4</sup> Transportation (except U.S. Postal Service), communications, electric, gas, and sanitary services.

<sup>5</sup> Limited to engineering, architectural, and surveying services; commercially operated research, development, and testing laboratories; advertising; credit reporting and collection agencies; computer and data processing services; management, consulting, and public relations services; noncommercial educational, scientific, and research organizations; and accounting, auditing, and bookkeeping services.

<sup>6</sup> Insufficient employment in 1 work level or more to warrant separate presentation of data.

NOTE: A dash indicated that no workers in the occupation were found in the industry.

# Appendix A. Scope and Method of Survey

## Scope

The survey relates to establishments<sup>1</sup> in the United States, except Alaska and Hawaii, employing at least a specified minimum number of workers, and engaged in the following industries: Mining; construction; manufacturing; transportation, communications, electric, gas, and sanitary services (except the U.S. Postal Service); wholesale trade; retail trade; finance, insurance and real estate; and selected services (table A-1). Establishments which employed fewer than the minimum number of employees specified for each industry division were excluded. Establishments which met the minimum size criteria during the reference period of the information used in compiling the survey universe were included, even if they employed fewer than the specified minimum number of workers at the time of the survey. Establishments found to be outside of the industrial scope of the survey at the time of data collection were excluded.

Table A-1 shows the estimated number of establishments and employees within scope of the survey and the number within the sample actually studied for each major industry division. Separate estimates are presented for establishments employing 2,500 workers or more and for those located in Standard Metropolitan Statistical Areas (SMSA's).<sup>2</sup> Similar estimates of the number of full-time white-collar employees are also provided.

## Sampling frame

The list of establishments (called the sampling frame) from which the sample was selected was developed by updating the 1980 survey sampling frame using data from the most recently available (usually March 1979) unemployment insurance reports for the 48 states and the District of Columbia. During the update process, some establishments were added, some were removed, while others changed address, employment, type of industry, or other information.

<sup>1</sup>For this survey, an establishment is an economic unit which produces goods or services, a central administrative office, or an auxiliary unit providing support services to a company. In manufacturing industries the establishment is usually a single physical location. In nonmanufacturing industries, all locations of an individual company within a Standard Metropolitan Statistical Area (SMSA) or within a nonmetropolitan county are usually considered an establishment.

<sup>2</sup>Metropolitan area data relate to all 276 SMSA's within the 48 states as revised through June 1977 by the U.S. Office of Management and Budget.

## Survey design

The design for a survey consists of the method by which individual establishments are classified into homogeneous groups or strata, how sample sizes were chosen for the individual strata, and the method by which the sample of establishments was selected from each stratum.

Establishments within scope of the 1981 survey were stratified by industry group and by total employment.

The sample size in a stratum was approximately proportional to the total employment of all establishments within the stratum. Thus, a stratum which contained 1 percent of total employment within the scope of the survey received approximately 1 percent of the total sample. Within each stratum, a random sample was selected systematically to maximize the probability of retaining establishments which were selected for the 1980 sample.<sup>3</sup> This method of selection would reduce collection costs by decreasing the number of new establishments in the sample.

## Data collection

Data for the survey were obtained by personal visits of the Bureau's field representatives to a nationwide sample of establishments. Collection was scheduled during the months of January through April to reflect an average reference period of March 1981.<sup>4</sup>

Employees were classified by occupation and level using job descriptions (appendix C) prepared jointly by the Bureau of Labor Statistics and the Office of Personnel Management. Descriptions are designed to reflect duties and responsibilities of employees in private industry and to be translatable to specific General Schedule grades applying to Federal employees (appendix D). Thus, definitions of some occupations and work levels were limited to specific elements which could be classified uniformly among establishments.

In comparing the actual duties and responsibilities of employees with those enumerated in job descriptions, the Bureau's field representatives, with the assistance of company officials, extensively used company position

<sup>3</sup>This method modifies the method introduced by Nathan Keyfitz in 1951 in his paper titled "Sampling with Probabilities Proportional to Size-Adjusting for Changes in the Probabilities," *Journal of the American Statistical Association*, No. 46, pp. 105-109.

<sup>4</sup>The March payroll period has been used since the 1972 survey. The 1970 and 1971 surveys had a June reference period.

descriptions, organization charts, and other personnel records.

Salaries reported for survey occupations are paid to full-time employees for standard work schedules, i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.

### Survey nonresponse

In the March 1981 survey, salary data were not available from about 14 percent of the assigned sample establishments (representing 2,950,000 employees in the total universe). An additional 4 percent of the sampled establishments (representing 833,000 employees) were either out of business or outside the scope of the survey.

If data were not provided by a sample member, the weights of responding establishments randomly selected from the same stratum were increased to adjust for the missing data. No adjustment was made for establishments which were out of business or out of the scope of the survey at the time of data collections.

Some sampled companies had a policy of not disclosing salary data for certain employees. No adjustments were made to salary estimates for the survey as a result of these missing data. In all but 8 of the 96 professional, administrative, technical, and clerical levels surveyed, the proportion of employees for whom salary data were not available was less than 5 percent.<sup>5</sup>

### Survey estimation methods

*Data conversion.* Salary data were collected from company records in the most readily available form, i.e., weekly, biweekly, semimonthly, monthly, or annually. Before initial tabulations, all salary data were converted to a monthly basis. The factors used to convert the salary data are as follows:

<i>Payroll basis</i>	<i>Conversion factor</i>
Weekly	4.3450
Biweekly	2.1725
Semimonthly	2.0000
Monthly	1.0000
Annually	.0833

Factors which reflect the normal work schedules for the month were used to convert hourly rates to a monthly basis.

*Employment.* Occupational employment counts, generated by the survey, are estimates of the total for all establishments within scope of the survey and are not limited to establishments actually studied. An occupational employ-

ment estimate was derived by multiplying the full-time employment in the occupation in each sample establishment by the establishment weight and then summing these results.

*Salary averages.* The mean salary (average wage rate) for a specific occupational level was obtained by dividing total wages for that level by the corresponding total employment. Median and quartile values were derived from distributions of employees by salary using 10-cent class intervals. All salary averages in the tables were rounded to the nearest dollar. For all annual salary calculations, individual monthly salaries (to the nearest one-tenth cent) were multiplied by 12 before performing the necessary data aggregation.

*Salary trends.* Percent increases for each occupation in text table 2 were obtained by adding the aggregate salaries for each level in each of 2 successive years and dividing the later sum by the earlier sum. To eliminate the effects of year-to-year employment shifts in this computation, average salaries in each year were multiplied by employment in the most recent year.

Year-to-year percent increases for each group specified in text table 3 were determined by adding average salaries for all occupational levels in the group for two consecutive years, and dividing the later sum by the earlier sum. The trends in text table 3 were obtained by linking changes for the individual periods.

Changes in the scope of the survey and in occupational definitions were incorporated into the various trend series as soon as two consecutive periods with comparable data were available.

### Limitations

Survey occupations were limited to employees meeting the specific criteria in each survey definition and were not intended to include all employees in each field of work.<sup>6</sup> Employees whose salary data were not available, as well as those for whom there was no satisfactory basis for classification by work level, were not taken into account in the estimates. For these reasons, and because of differences in occupational structure among establishments, estimates of occupational employment obtained from the sample of establishments studied indicate only the relative importance of occupations and levels as defined for the survey. These qualifications of employment estimates should not materially affect the accuracy of the earnings data.

<sup>6</sup>Engineers, for example, include employees engaged in engineering work within a band of eight levels, starting with inexperienced engineering graduates and excluding only those within certain fields of specialization or in positions above those covered by level VIII. In contrast, occupations such as chief accountants and directors of personnel include only those with responsibility for a specified program and with duties and responsibilities as indicated for each of the more limited number of work levels selected for study.

<sup>5</sup> Those with 5 percent or more were: Chief accountants II at 8 percent and levels III and IV at 11 percent; attorneys IV—6 percent; and directors of personnel I, II, III and IV—5, 7, 19, and 28, respectively.

Data on year-to-year changes in average salaries are subject to limitations which reflect the nature of the data collected. Changes in average salaries reflect not only general salary increases and merit or other increases in the same work level category, but also other factors such as employee turnover, expansions or contractions in the work force, and changes in staffing patterns within establishments with different salary levels. For example, an expansion in force may increase the proportion of employees at the minimum salary range for a work level, which would tend to lower the average; whereas, a reduction or a low turnover in the work force may have the opposite effect. Similarly, promotions of employees to higher work levels of professional and administrative occupations may affect the average of each level. Established salary ranges for such occupations are relatively wide, and employees who may have been paid the maximum of the salary scale for the lower level are likely to be replaced by less experienced employees who may be paid the minimum. Occupations most likely to reflect such changes are the higher levels of professional and administrative occupations and single-incumbent positions such as chief accountant and director of personnel.

#### **Reliability of estimates**

The relative standard error of an average salary estimate is a measure of the reliability of that estimate: The smaller

the relative standard error, the greater the reliability of the estimate.<sup>7</sup> Estimates of relative standard errors for the 1981 survey vary widely among various occupational work levels depending on a number of factors, which include: The frequency with which the job occurs, the dispersion of salaries for the job, and the survey design. For the 96 published occupational work levels, estimated relative standard errors for the average salary estimates were distributed as follows: 62 were under 1 percent; 20 were between 1 and 2 percent; 6 were between 2 and 3 percent; 8 were between 3 and 4 percent. The current method of estimating standard errors for this survey indicates a 70 percent chance that the true value of a salary average lies within a band of values defined by the reported average plus and minus two standard errors.

<sup>7</sup>A replication technique with one replicate was used to obtain estimates of relative standard errors for the 1981 survey. Standardized survey wage rate estimates are, thus, approximately distributed as a student's "t" random variable with one degree of freedom. Although no estimates of the effects of nonresponse are available, the reduction of the reliability of wage rate estimates should be small because of the nature of the data collected, the survey method, and high response rate.

**Table A-1. Number of establishments and workers within scope of survey and number studied, by industry division, United States, March 1981.**

Industry division <sup>1</sup>	Minimum employment in establishments within scope of survey	Number of establishments	Within scope of survey			Studied			
			Workers in establishments		Number of establishments	Workers in establishments		Clerical and technical support	
			Total	Professional and administrative		Clerical and technical support	Total		Professional and administrative
<b>United States</b>									
All Industries <sup>2</sup> .....	—	43,238	23,684,800	4,910,806	5,483,032	3,436	6,295,054	1,573,635	1,478,029
Manufacturing .....	*100-250	20,648	12,643,565	2,433,497	1,697,840	1,673	3,623,449	863,838	535,148
Nonmanufacturing:									
Mining .....	250	635	485,256	85,425	53,117	69	94,055	26,134	18,891
Construction .....	250	673	351,000	75,464	56,407	62	56,351	20,200	14,716
Transportation, communication, electric, gas, and sanitary services .....	*100-250	4,055	2,921,363	615,136	707,451	365	1,141,329	283,514	309,726
Wholesale trade .....	100	4,961	1,005,063	279,945	280,327	271	72,588	25,772	25,006
Retail trade .....	250	3,644	3,088,516	338,904	966,227	290	511,826	59,320	160,705
Finance, insurance and real estate .....	100	6,181	2,401,470	702,131	1,431,369	423	576,453	181,284	342,775
Selected services <sup>3</sup> .....	*50-100	2,541	788,367	380,304	270,294	283	219,003	113,573	71,062
<b>Metropolitan areas<sup>4</sup></b>									
All Industries .....	—	34,936	19,990,940	4,451,430	5,068,539	2,925	5,874,413	1,503,077	1,423,688
Manufacturing .....	*100-250	14,945	9,800,699	2,114,089	1,459,702	1,310	3,306,280	815,885	500,206
Nonmanufacturing:									
Mining .....	250	351	286,991	59,634	36,216	38	56,727	18,214	13,357
Construction .....	250	614	324,673	70,577	53,001	53	49,329	18,210	13,498
Transportation, communication, electric, gas, and sanitary services .....	*100-250	3,014	2,586,869	560,536	643,571	319	1,102,056	275,410	303,933
Wholesale trade .....	100	4,290	908,602	263,846	267,491	248	69,597	25,229	24,580
Retail trade .....	250	3,442	3,001,553	330,467	967,988	277	504,686	58,402	159,533
Finance, insurance, and real estate .....	100	5,813	2,306,387	675,146	1,376,302	403	568,824	178,822	338,625
Selected services <sup>5</sup> .....	*50-100	2,467	775,166	377,135	264,268	277	216,914	112,905	69,956
<b>Establishments employing 2,500 workers or more</b>									
All Industries .....	—	1,066	6,950,699	1,720,589	1,802,380	680	4,775,350	1,230,541	1,109,034
Manufacturing .....	—	481	3,791,094	982,747	587,837	398	2,888,127	725,093	430,808

<sup>1</sup>As defined in the 1972 edition of the *Standard Industrial Classification Manual*, U.S. Office of Management and Budget.

<sup>2</sup>Establishments with total employment at or above the minimum limitation indicated in the first column; excludes Alaska and Hawaii.

<sup>3</sup>Minimum employment size was 100 for chemical and allied products; petroleum refining and related industries; machinery, except electrical; electrical machinery, equipment, and supplies; transportation equipment; and instruments and related product. Minimum size was 250 in all other manufacturing industries.

<sup>4</sup>Minimum employment size was 100 for railroad transportation; local and suburban transit; deep sea foreign and domestic transportation; air transportation; communications, electric, gas and sani-

tary services; and pipelines; and 250 for all other transportation industries. U.S. Postal Services is excluded from the survey.

<sup>5</sup>Limited to advertising; credit reporting and collection agencies; computer and data processing services; research and development laboratories; commercial testing laboratories; management and public relations services; engineering and architectural services; noncommercial research organizations; and accounting, auditing, and bookkeeping services.

<sup>6</sup>Minimum employment size was 50 for accounting, auditing, and bookkeeping services; and 100 for all other selected services.

<sup>7</sup>Standard metropolitan statistical areas in the United States, except Alaska and Hawaii, as revised through June 1977 by the U.S. Office of Management and Budget.

## Appendix B. Survey Changes in 1981

### **Changes in occupational definitions**

The definition for messenger was revised to improve clarity during the job matching process.

The definitions for computer operator and personnel clerk/assistant (formerly personnel clerk) were revised to improve alignment with Federal personnel classification standards.

The definition for secretary underwent a major change to conform to a new Federal classification standard—a

requirement for jobs in the pay comparability process and the survey.

The job titles for the two stenographer work levels were modified slightly.

### **Occupations added**

Five levels of photographers and three levels of purchasing assistants, as defined in appendix C, have been added to the survey.

# Appendix C. Occupational Definitions

The primary purpose of preparing job definitions for the Bureau's wage surveys is to assist its field staff in classifying into appropriate occupations, or levels within occupations, workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits the grouping of occupational wage rates representing comparable job content. To secure comparability of job content, some occupations and work levels are defined to include only those workers meeting specific criteria as to training, job functions, and responsibilities. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's occupational definitions may differ significantly from those in use in individual establishments or those prepared for other purposes.

## ACCOUNTANTS AND AUDITORS

### ACCOUNTANT

Performs professional operating or cost accounting work requiring knowledge of the theory and practice of recording, classifying, examining, and analyzing the data and records of financial transactions. The work generally requires a bachelor's degree in accounting or, in rare instances, equivalent experience and education combined. Positions covered by this definition are characterized by the inclusion of work that is analytical, creative, evaluative, and advisory in nature. The work *draws* upon and *requires* a thorough knowledge of the fundamental doctrines, theories, principles, and terminology of accountancy, and often entails some understanding of such related fields as business law, statistics, and general management. (See also chief accountant.)

Professional responsibilities in accountant positions above the entry and developmental levels include several such duties as:

Analyzing the effects of transactions upon account relationships;

Evaluating alternative means of treating transactions;

Planning the manner in which account structures should be developed or modified;

Assuring the adequacy of the accounting system as the basis for reporting to management;

Considering the need for new or changed controls;

Projecting accounting data to show the effects of proposed plans on capital investments, income, cash position, and overall financial condition;

Interpreting the meaning of accounting records, reports, and statements;

Advising operating officials on accounting matters; and

Recommending improvements, adaptations, or revisions in the accounting system and procedures.

(Entry and developmental level positions provide opportunity to develop ability to perform professional duties such as those enumerated above.)

*In addition* to such professional work, most accountants are also responsible for assuring the proper recording and documentation of transactions in the accounts. They, therefore, frequently direct nonprofessional personnel in the actual day-to-day maintenance of books of accounts, the accumulation of cost or other comparable data, the preparation of standard reports and statements, and similar work. (Positions involving such supervisory work but not including professional duties as described above are not included in this description.)

*Excluded* are accountants whose *principal or sole* duties consist of designing or improving accounting systems or other nonoperating staff work, e.g., budget analysis, financial analysis, financial forecasting, tax advising, etc. (The criteria that follow for distinguishing among the several levels of work are inappropriate for such jobs.) Note, however, that professional accountant positions with responsibility for recording or reporting accounting data relative to taxes are included, as are other operating or cost accountants whose work includes, but is not limited to, improvement of the accounting system.



Some accountants use electronic data processing equipment to process, record, and report accounting data. In some such cases the machine unit is a subordinate segment of the accounting system; in others it is a separate entity or is attached to some other organization. In either instance, provided that the primary responsibility of the position is professional accounting work of the type otherwise included, the use of data processing equipment of any type does not of itself exclude a position from the accountant description nor does it change its level.

### Accountant I

*General characteristics.* At this beginning professional level, the accountant learns to apply the principles, theories, and concepts of accounting to a specific system. The position is distinguishable from nonprofessional positions by the variety of assignments; rate and scope of development expected of the incumbent; and the existence, implicit or explicit, of a planned training program designed to give the entering accountant practical experience. (Terminal positions are excluded.)

*Direction received.* Works under close supervision of an experienced accountant whose guidance is directed primarily to the development of the trainee's professional ability and to the evaluation of advancement potential. Limits of assignments are clearly defined, methods of procedure are specified, and kinds of items to be noted and referred to supervisor are identified.

*Typical duties and responsibilities.* Performs a variety of accounting tasks such as: Examining a variety of financial statements for completeness, internal accuracy, and conformance with uniform accounting classifications or other specific accounting requirements; reconciling reports and financial data with financial statements already on file, and pointing out apparent inconsistencies or errors; carrying out assigned steps in an accounting analysis, such as computing standard ratios; assembling and summarizing accounting literature on a given subject; preparing relatively simple financial statements not involving problems of analysis or presentation; and preparing charts, tables, and other exhibits to be used in reports. In addition to such work, may also perform some nonprofessional tasks for training purposes.

*Responsibility for direction of others.* Usually none.

### Accountant II

*General characteristics.* At this level, the accountant makes practical application of technical accounting practices and concepts beyond the mere application of detailed rules and instructions, as a phase in developing greater professional competence. Initial assignments are designed to expand

practical experience and to develop professional judgment in the application of basic accounting techniques to simple problems. Is expected to be competent in the application of standard procedures and requirements to routine transactions, to raise questions about unusual or questionable items, and to suggest solutions. (Terminal positions are excluded.)

*Direction received.* Work is reviewed closely to verify its general accuracy and coverage of unusual problems, to insure conformance with required procedures and special instructions, and to assure professional growth. Progress is evaluated in terms of ability to apply professional knowledge to basic accounting problems in the day-to-day operations of an established accounting system.

*Typical duties and responsibilities.* Performs a variety of accounting tasks, e.g., prepares routine working papers, schedules, exhibits, and summaries indicating the extent of the examination and presenting and supporting findings and recommendations. Examines a variety of accounting documents to verify accuracy of computations and to ascertain that all transactions are properly supported, are in accordance with pertinent policies and procedures, and are classified and recorded according to acceptable accounting standards.

*Responsibility for direction of others.* Usually none, although sometimes responsible for supervision of a few clerks.

### Accountant III

*General characteristics.* The accountant, at this level, applies well-established accounting principles, theories, concepts, and practices to moderately difficult problems. Receives detailed instructions concerning the overall accounting system and its objectives, the policies and procedures under which it is operated, and the nature of changes in the system or its operation. Characteristically, the accounting system or assigned segment is stable and well established, (i.e., the basic chart of accounts, classifications, the nature of the cost accounting system, the report requirements, and the procedures are changed infrequently).

Depending upon the workload involved, the accountant may have such assignments as supervision of the *day-to-day operation* of: (a) The entire system of a relatively small establishment, or (b) a major segment (e.g., general accounting; cost accounting; or financial statements and reports) of a somewhat larger system, or (c) in a complex system, may be assigned to a relatively narrow and specialized segment dealing with some problem, function, or portion of work which is itself of the level of difficulty characteristic of this level.

*Direction received.* A higher level professional accountant normally is available to furnish advice and assistance as

needed. Work is reviewed for technical accuracy, adequacy of professional judgement, and compliance with instructions through spot checks, appraisal of results, subsequent processing, analysis of reports and statements, and other appropriate means.

*Typical duties and responsibilities.* The primary responsibility of most positions at this level is to assure that the assigned day-to-day operations are carried out in accordance with established accounting principles, policies, and objectives. The accountant performs such professional work as: Developing nonstandard reports and statements (e.g., those containing cash forecasts reflecting the interrelations of accounting, cost budgeting, or comparable information); interpreting and pointing out trends or deviations from standards; projecting data into the future; predicting the effects of changes in operating programs; or identifying management informational needs, and refining account structures or reports accordingly.

Within the limits of delegated responsibility, makes day-to-day decisions concerning the accounting treatment of financial transactions. Is expected to recommend solutions to moderately difficult problems and propose changes in the accounting system for approval at higher levels. Such recommendations are derived from personal knowledge of the application of well-established principles and practices.

*Responsibility for the direction of others.* In most instances is responsible for supervision of a subordinate nonprofessional staff; may coordinate the work of lower level professional accountants.

#### **Accountant IV**

*General characteristics.* At this level the accountant applies well-established accounting principles, theories, concepts, and practices to a wide variety of difficult problems. Receives instructions concerning the objectives and operation of the overall accounting system. Compared with level III, the accounting system or assigned segment is more complex, i.e., (a) is relatively unstable, (b) must adjust to new or changing company operations, (c) is substantially larger or (d) is complicated by the need to provide and coordinate separate or specialized accounting treatment and reporting (e.g., cost accounting using standard cost, process cost, and job order techniques) for different operations or divisions of company.

Depending upon the workload and degree of coordination involved, the accountant IV may have such assignments as the supervision of the *day-to-day operation* of: (a) The entire accounting system of an establishment having a few relatively stable accounting segments, or (b) a major segment (e.g., general accounting; cost accounting; or financial statements and reports) of an accounting system serving a larger and more complex establishment, or (c) in a complex system, may be assigned to a relatively narrow

and specialized segment dealing with some problem, function, or portion of work which is itself of the level of difficulty characteristic to this level.

*Direction received.* A higher level accountant normally is available to furnish advice and assistance as needed. Work is reviewed by spot checks and appraisal of results for adequacy of professional judgment, compliance with instructions, and overall accuracy and quality.

*Typical duties and responsibilities.* As a level III, a primary characteristic of most positions at this level is the responsibility of operating an accounting system or major segment of a system in the intended manner.

The accountant IV exercises professional judgment in making frequent appropriate recommendations for: New accounts; revisions in the account structure; new types of ledgers; revisions in reporting system or subsidiary records; changes in instructions regarding the use of accounts, new or refined account classifications or definitions; etc. Also makes day-to-day decisions concerning the accounting treatment of financial transactions and is expected to recommend solutions to complex problems beyond incumbent's scope of responsibility.

*Responsibility for direction of others.* Accounting staff supervised, if any, may include professional accountants.

#### **Accountant V**

*General characteristics.* The accountant V applies accounting principles, theories, concepts, and practices to the solution of problems for which no clear precedent exists or performs work which is of greater than average responsibility due to the nature or magnitude of the assigned work. Responsibilities at this level, in contrast to accountants at level IV, extend beyond accounting system maintenance to the solution of more complex technical and managerial problems. Work of accountants V is more directly concerned with what the accounting system (or segment) should be, what operating policies and procedures should be established or revised, and what is the managerial as well as the accounting meaning of the data included in the reports and statements for which they are responsible. Typically this level of work approaches chief accountant positions in terms of the nature of the concern for the accounting system and its operation, but not in terms of the breadth or scope of responsibility.

Examples of assignments characteristic of this level are supervision of the *day-to-day operation* of: (a) The entire accounting system of an establishment having a few relatively complex accounting segments, or (b) a major segment of a larger and more complex accounting system, or (c) the entire accounting system (or major segment) of a company that has a relatively stable and conventional accounting

system when the work includes significant responsibility for accounting systems design and development, or (d) in a complex system, may be assigned to a relatively narrow and specialized segment dealing with some problem, function, or portion of work which is itself of the level of difficulty characteristic of this level.

*Direction received.* An accountant of higher level normally is available to furnish advice and assistance as needed. Work is reviewed for adequacy of professional judgment, compliance with instructions, and overall quality.

*Typical duties and responsibilities.* The accountant V performs such professional work as: Participating in the development and coordinating the implementation of new or revised accounting systems, and initiating necessary instructions and procedures; assuring accounting reporting systems and procedures are in compliance with established company policies, regulations, and acceptable accounting practices; providing technical advice and services to operating managers, interpreting accounting reports and statements, and identifying problem areas; evaluating completed assignments for conformance with applicable policies, regulations, and tax laws.

*Responsibility for direction of others.* Accounting staff supervised generally includes professional accountants.

## Accountant VI

*General characteristics.* At this level the accountant applies accounting principles, theories, concepts, and practices to specialized, unique, or nonrecurring complex problems (e.g., implementation of specialized automated accounting systems). The work is substantially more difficult and of greater responsibility than Level V because of the unusual nature, magnitude, importance, or overall impact of the work on the accounting program.

At this level the accounting system or segment is usually complex, i.e., (a) is generally unstable, (b) must adjust to the frequent changing needs of company operations, or (c) is complicated by the need to provide specialized or individualized reports.

Examples of assignments at this level are the supervision of the *day-to-day* operation of: (a) A large and complex corporate accounting system, or (b) a major segment (e.g., general accounting, property accounting, etc.) of an unusually complex accounting system requiring technical expertise in a particular accounting field (e.g., cost accounting, tax accounting, etc.).

*Direction received.* A higher level professional accountant is normally available to furnish advice as needed. Work is reviewed for adequacy of professional judgment, compliance with instructions and policies, and overall quality.

*Typical duties and responsibilities.* Accountants at this level are delegated complete responsibility from higher authority to establish and implement new or revised accounting policies and procedures. Typically, accountants VI participate in decision-making sessions with operating managers who have policy-making authority for their subordinate organizations or establishments; recommend management actions or alternatives which can be taken when accounting data disclose unfavorable trends, situations, or deviations; and assist management officials in applying financial data and information to the solution of administrative and operating problems.

*Responsibility for the direction of others.* Accounting staff supervised generally includes professional accountants.

*NOTE:* Excluded are accountants above Level VI whose principal function is to direct, manage or administer an accounting program in that they are *primarily* concerned with the administrative, budgetary, and policy matters of the program rather than the actual supervision of the day-to-day operations of an accounting program. This type of work requires extensive managerial ability as well as superior professional competence in order to cope with the technical accounting and management problems encountered. Typically this level of work involves responsibility for more than one accounting activity (e.g., cost accounting, sales accounting, etc.).

## CHIEF ACCOUNTANT

As the top technical expert in accounting, is responsible for directing the accounting program for a company or for an establishment of a company. The minimum accounting program includes: (1) General accounting (assets, liabilities, income, expense, and capital accounts, including responsibility for profit and loss and balance sheet statements); *and* (2) at least one other *major* accounting activity, typically tax accounting, cost accounting, property accounting, or sales accounting. It may also include such other activities as payroll and timekeeping, and mechanical or electronic data processing operations which are an adjunct of the accounting system. (Responsibility for an internal audit program is typically *not* included.)

The responsibilities of the chief accountant include *all* of the following:

- (1) On own responsibility, developing, adapting or revising an accounting system to meet the needs of the organization;
- (2) Supervising, either directly or through subordinate supervisors, the operation of the system with full management responsibility for the quality and quantity of work performed, training and development of subordinates, work scheduling and review, coordination with other parts of the organization served, etc.;

**Table C-1 Criteria for matching chief accountants by level**

Level	Authority and Responsibility <sup>1</sup>	Technical Complexity <sup>1</sup>	Subordinate Professional Accounting Staff
I	AR-1	TC-1	Only one or two professional accountants, who do not exceed the accountant III job definition.
II	AR-1	TC-2	About 5 to 10 professional accountants, with at least one or two matching the accountant IV job definition.
	or		
	AR-2	TC-1	About 5 to 10 professional accountants, Most of these match the accountant III job definition, but one or two may match the accountant IV job definition.
III	or		
	AR-3	TC-1	Only one or two professional accountants, who do not exceed the accountant IV job definition.
	AR-1	TC-3	About 15 to 20 professional accountants. At least one or two match the accountant V job definition.
IV	or		
	AR-2	TC-3	About 25 to 40 professional accountants. Many of these match the accountant V job definition, but several may exceed that level.
	AR-3	TC-2	About 15 to 20 professional accountants. Most of these match the accountant IV job definition, but several may match the accountant V and one or two may exceed that level.
V	AR-3	TC-3	About 25 to 40 professional accountants. Many of these match the accountant V job definition, but several may exceed that level.

<sup>1</sup> AR-1, -2, and -3 and TC-1, -2, and -3 are explained in the accompanying text.

- (3) Providing directly or through an official such as a comptroller, advisory services to the top management officials of the organization served as to:
- (a) The status of financial resources and the financial trends or results of operations as revealed by accounting data, and selecting a manner of presentation that is meaningful to management;
  - (b) Methods for improving operations as suggested by an expert knowledge of accounting, e.g., proposals for improving cost control, property management, credit and collection, tax reduction, or similar programs.

*Excluded* are positions with responsibility for the accounting program if they also include (as a major part of the job) responsibility for budgeting; work measurement; organization, methods, and procedures studies; or similar non-accounting functions. (Positions of such breadth are sometimes titled comptroller, budget and accounting manager,

financial manager, etc.)

Some positions responsible for supervising general accounting and one or more other major accounting activities but which do *not* fully meet *all* of the responsibilities of a chief accountant specified above may be covered by the descriptions for accountant.

Chief accountant jobs which meet the characteristics described are classified by level of work according to (a) authority and responsibility and (b) technical complexity, using table C-1.

### Authority and Responsibility

*AR-1.* The accounting system (i.e., accounts, procedures, and reports to be used) has been prescribed in considerable detail by higher levels in the company or organization. The chief accountant has final, unreviewed authority within the prescribed system, to expand it to fit the particular needs of the organization served, e.g., in the following or comparable ways:

Provides greater detail in accounts and reports or financial statements;

Establishes additional accounting controls, accounts, subaccounts, and subsidiary records; and

Provides special or interim reports and statements needed by the manager responsible for the day-to-day operations of the organization served.

This degree of authority is typically found at a plant or similar subordinate establishment.

**AR-2.** The basic accounting system is prescribed in broad outline rather than in specific detail. While certain major financial reports, overall accounts, and general policies are required by the basic system, the chief accountant has broad latitude and *authority* to decide the specific methods, procedures, accounts, reports, etc., to be used within the organizational segment served. Approval must be secured from higher levels only for those changes which would basically affect the broad requirements prescribed by such higher levels. Typical responsibilities include:

Evaluating and taking final action on recommendations proposed by subordinate establishments for changes in aspects of the accounting system or activities not prescribed by higher authority;

Extending cost accounting operations to areas not previously covered;

Instituting new cost accounting procedures;

Expanding the utilization of computers within the accounting process; and

Preparing accounting reports and statements reflecting the events and progress of the entire organization for which incumbent is responsible; often consolidating data submitted by subordinate segments.

This degree of authority is most typically found at intermediate organizational levels such as regional offices, or division or subsidiary headquarters. It is also found in some company level situations where the authority of the chief accountant is less extensive than is described in AR-3. More rarely it is found in plant level chief accountants who have been delegated more authority than usual for such positions as described in AR-1.

**AR-3.** Has complete responsibility for establishing and maintaining the framework for the basic accounting system used in the company, subject only to general policy guidance and control from a higher level company official responsible for general financial management. Typical responsibilities include:

Determining the basic characteristics of the company's accounting system and the specific accounts to be used;

Devising and preparing accounting reports and statements required to meet management's needs for data;

Establishing basic accounting policies, interpretations, and procedures;

Reviewing and taking action on proposed revisions to the company's accounting system suggested by subordinate units; and

Taking final action on all technical accounting matters.

Characteristically, participates extensively in broad company management processes by providing accounting advice, interpretations, or recommendations based on data accumulated in the accounting system and on professional judgment and experience.

### Technical Complexity

**TC-1.** The organization which the accounting program serves has relatively few functions, products, work processes, etc., and these tend to be stable and unchanging. The accounting system operates in accordance with well-established principles and practices or those of equivalent difficulty which are typical of that industry.

**TC-2.** The organization which the accounting program serves has a relatively large number of functions, products, work processes, etc. which require substantial and frequent adaptations of the basic system to meet management needs (e.g., adoption of new accounts, subaccounts, and subsidiary records; revision of instructions for the use of accounts; improvement or expansion of methods for accumulating and reporting cost data in connection with new or changed work processes).

**TC-3.** The organization which the accounting program serves puts a *heavy demand on the accounting organization for specialized and extensive adaptations* of the basic system to meet management needs. Such demands arise because the functions, products, work processes, etc., of the organization are very numerous, diverse, unique, or specialized, or there are other comparable complexities. Consequently, the accounting system, to a considerable degree, is developed well beyond established principles and accounting practices in order to:

Provide for the solution of problems for which no clear precedents exist; or

Provide for the development or extension of accounting theories and practices to deal with problems to which these theories and practices have not previously been applied.

### Subordinate Staff

In table C-1, the number of professional accountants supervised is recognized to be a relatively crude criterion for distinguishing between various levels.<sup>1</sup> It is to be considered

<sup>1</sup> Insufficient data were obtained for level V to warrant presentation of average salaries.

less important in the matching process than the other criteria. In addition to the staff of professional accountants in the system for which the chief accountant is responsible, there are clerical, machine operation, bookkeeping and related personnel.

## AUDITOR

Performs professional auditing work requiring a bachelor's degree in accounting or, in rare instances, equivalent experience and education combined. Audits the financial records and practices of a company, or of divisions or components of the company, to appraise systematically and verify the accounting accuracy of records and reports and to assure the consistent application of accepted accounting principles. Evaluates the adequacy of the accounting system and internal financial controls. Makes appropriate recommendations for improvement as necessary. To the extent determined necessary, examines the transactions entering into the balance sheet, and the transactions entering into income, expense, and cost accounts. Determines:

- (1) The existence of recorded assets (including the observation of the taking of physical inventories) and the all-inclusiveness of recorded liabilities.
- (2) The accuracy of financial statements or reports and the fairness of presentation of facts therein.
- (3) The propriety or legality of transactions.
- (4) The degree of compliance with established policies and procedures concerning financial transactions.

*Excluded* from this definition are:

- a. Auditors primarily examining or reporting on the financial management of company operations. These auditors evaluate such matters as: (1) The operation's degree of compliance with the principles of sound financial management; and (2) the effectiveness of management and operating controls;
- b. Auditors assigned to audit programs which are confined on a relatively permanent basis to repetitive examination of a limited area of company operations and accounting processes, e.g., accounts payable and receivable; payroll; physical inventory; and branch offices which do not have complete accounting systems. This does not preclude positions responsible for performing a segment of an audit (i.e., examining individual items on a balance sheet, rather than the entire balance sheet), *as long as the work directly relates to the financial audit program*; and
- c. EDP auditors. These positions require an extensive knowledge of computer systems, programming, etc.

### Auditor I

*General characteristics.* As a trainee auditor at the entering professional level, performs a variety of routine assignments. Typically, the trainee is rotated through a variety of tasks under a planned training program designed to

provide practical experience in applying the principles, theories, and concepts of accounting and auditing to specific situations. (Terminal positions are excluded.)

*Direction received.* Works under close supervision of an experienced auditor whose guidance is directed primarily to the development of the trainee's professional ability and to the evaluation of advancement potential. Limits of assignments are clearly defined, methods of procedure are specified, and kinds of items to be noted and referred to supervisor are identified.

*Typical duties and responsibilities.* Assists in making audits by performing such tasks as: Verification of the accuracy of the balances in various records; examination of a variety of types of documents and vouchers for accuracy of computations; checking transactions to assure they are properly documented and have been recorded in accordance with correct accounting classifications; verifying the count of inventories; preparing detailed statements, schedules, and standard audit working papers; counting cash and other assets; preparing simple reconciliations and similar functions.

### Auditor II

*General characteristics.* At this level the professional auditor serves as a junior member of an audit team, independently performing selected portions of the audit which are limited in scope and complexity, as a phase in developing greater professional competence. Auditors at this level typically have acquired knowledge of company operations, policies, and procedures. (Terminal positions are excluded.)

*Direction received.* Detailed instructions are furnished and the work is reviewed to the extent necessary to verify its general accuracy and coverage of unusual problems, to insure conformance with required procedures and special instructions, and to assure the auditor's professional growth. Any technical problems not covered by instructions are brought to the attention of a superior. Progress is evaluated in terms of ability to apply professional knowledge to basic auditing situations.

*Typical duties and responsibilities.* Applies knowledge of *accounting theory* and audit practices to a variety of relatively simple professional problems in audit assignments, including such tasks as: The verification of reports against source accounts and records to determine their reliability; reconciliation of bank and other accounts and verifying the detail of recorded transactions; detailed examinations of cash receipts and disbursement vouchers, payroll records, requisitions, work orders, receiving reports, and other accounting documents to ascertain that transactions are properly supported and are recorded correctly from an accounting or regulatory standpoint; or preparing working papers, schedules, and summaries.

### Auditor III

*General characteristics.* Work at this level consists of the audit of operations and accounting processes that are relatively stable, well-established, and typical of the industry. The audits primarily involve the collection and analysis of readily available findings; there is previous audit experience that is directly applicable; the audit reports are normally prepared in a prescribed format using a standard method of presentation; and few, if any, major problems are anticipated. The work performed requires the *application* of substantial knowledge of accounting principles and practices, e.g., bases for distinguishing among capital maintenance and operating expenses; accruing reserves for taxes; and other accounting considerations of an equivalent nature.

*Direction received.* Work is normally within an established audit program and supervision is provided by a higher level auditor who outlines and discusses assignments. Work is spot-checked in progress. Completed assignments are reviewed for adequacy of coverage, soundness of judgment, compliance with professional standards, and adherence to policies.

*Typical duties and responsibilities.* The auditor examines transactions and verifies accounts; observes and evaluates accounting procedures and internal controls; prepares audit working papers and submits an audit report in the required pattern containing recommendations for needed changes or improvements. Usually is responsible for selecting the detailed audit methods to follow, choosing the audit sample and its size, determining the extent to which discrepancies need to be investigated and deciding the depth of the analyses required to support reported findings and conclusions.

Examples of assignments involving work at this level:

- (1) As a team leader or working alone, independently conducts audits of the complete accounts and related operations of smaller or less complex companies (e.g., involving a centralized accounting system with few or no subordinate, subsidiary, or branch accounting records) or of comparable segments of larger companies.
- (2) As a member of an audit team, independently accomplishes varied audit assignments of the above described characteristics, typically major segments of complete audits, or assignments otherwise limited in scope, of larger and more complex companies (e.g., complex in that the accounting system entails cost, inventory, and comparable specialized *systems* integrated with the general accounting system).

Illustrative of such assignments are the audit and initial review of the accounting treatment and validity of reporting of overhead expenses in a large manufacturing or main-

tenance organization (e.g., major repair yard of a railroad); or, the checking, verification, and balancing of all accounts receivable and accounts payable; or, the analysis and verification of assets and reserves or, the inspection and evaluation of accounting controls and procedures.

### Auditor IV

*General characteristics.* Auditors at this level are experienced professionals who apply thorough knowledge of accounting principles and theory in connection with a *variety* of audits. Work at this level is characterized by the audit of organizations and accounting processes which are complex and difficult because of such factors as: Presence of new or changed programs and accounting systems; existence of major specialized accounting functions (e.g., cost accounting, inventory accounting, sales accounting), in addition to general accounting; need to consider extensive and complicated regulatory requirements; lack of or difficulty in obtaining information; and other similar factors. Typically, a variety of different assignments are encountered over a period of time, e.g., one year. The audit reports prepared are comprehensive, explain irregularities, cite rules and regulations violated, recommend remedial actions, and contain analyses of items of special importance or interest to company management.

*Direction received.* Within an established audit program, has responsibility for independently planning and executing audits. Unusually difficult problems are discussed with the supervisor who also reviews completed assignments for adherence to principles and standards and the soundness of conclusions.

*Typical duties and responsibilities.* Auditors at this level have full responsibility for planning the audit, including determination of the aspects to emphasize, methods to be used, development of nonstandard or specialized audit aids, such as questionnaires, etc., *where previous audit experience and plans are of limited applicability.*

Included in the scope of work that characterizes this level are such functions as: Evaluation of methods used for determining depreciation rates of equipment; evaluation of assets where original costs are unknown; evaluation of the reliability of accounting and reporting systems; analysis of cost accounting systems and cost reports to evaluate the basis for cost and price setting; evaluation of accounting procurement and supply management records, controls, and procedures; and many others.

Examples of assignments involving work at this level:

- (1) As a team leader or working alone, independently plans and conducts audits of the complete accounts and related operations of relatively large complex companies (e.g., complex in that the accounting system entails cost, inventory, and comparable specialized accounting *systems* inte-

grated with the general accounting system) or, of company branch, subsidiary, or affiliated organizations which are individually of comparable size and complexity.

- (2) As a member of an audit team independently plans and accomplishes audit assignments that constitute major segments of audits of very large and complex organizations, for example, those with financial responsibilities so great as to involve specialized subordinate, subsidiary, or affiliate accounting systems that are complete in themselves.

*NOTE:* Excluded from level IV are auditors who, as team leaders or working alone, conduct *complete* audits of very large and complex organizations, for example, those with financial responsibilities so great as to involve specialized subordinate, subsidiary, or affiliate accounting systems that are complete in themselves; or are team members assigned to major segments of audits of even larger or more complex organizations. Also excluded are positions primarily responsible for overseeing multiple concurrent audits.

## **PUBLIC ACCOUNTANT**

Performs professional auditing work in a public accounting firm. Work requires at least a bachelor's degree in accounting. Participates in or conducts audits to ascertain the fairness of financial representations made by client companies. May also assist the client in improving accounting procedures and operations.

Examines financial reports, accounting records, and related documents and practices of clients. Determines whether all important matters have been disclosed and whether procedures are consistent and conform to acceptable practices. Samples and tests transactions, internal controls, and other elements of the accounting system(s) as needed to render the accounting firm's final written opinion.

*Excluded* are positions which do not require full professional accounting training. Also excluded are specialist positions in tax or management advisory services.

## **Public Accountant I**

*General Characteristics.* As an entry level public accountant, serves as a junior member of an audit team. Receive classroom and on-the-job training to provide practical experience in applying the principles, theories, and concepts of accounting and auditing to specific situations. (Positions held by trainee public accountants with advanced degrees, such as MBA's, are excluded at this level.)

*Direction received.* Complete instructions are furnished and work is reviewed to verify its accuracy, conformance with required procedures and instructions, and usefulness in facilitating the accountant's professional growth. Any

technical problems not covered by instructions are brought to the attention of a superior.

*Typical duties and responsibilities.* Carries out basic audit tests and procedures, such as: Verifying reports against source accounts and records; reconciling bank and other accounts; and examining cash receipts and disbursements, payroll records, requisitions, receiving reports, and other accounting documents in detail to ascertain that transactions are properly supported and recorded. Prepares selected portions of audit working papers.

## **Public Accountant II**

*General characteristics.* At this level, the public accountant carries out routine audit functions and detail work with relative independence. Serves as a member of an audit team on assignments planned to provide exposure to a variety of client organizations and audit situations. Specific assignments depend upon the difficulty and complexity of the audit and whether the client has been previously audited by the firm. On moderately complex audits where there is previous audit experience by the firm, accomplishes complete segments of the audit (i.e., functional work areas such as cash, receivables, etc.). When assigned to more complicated audits, carries out activities similar to Public Accountant I.

*Direction received.* Works under the supervision of a higher level public accountant who provides instructions and continuing direction as necessary. Work is spot checked in progress and reviewed upon completion to determine the adequacy of procedures, soundness of judgment, compliance with professional standards, and adherence to clearly established methods and techniques. All interpretations are subject to close professional review.

*Typical duties and responsibilities.* Carries out a variety of sampling and testing procedures in accordance with the prescribed audit program, including the examination of transactions and verification of accounts, the analysis and evaluation of accounting practices and internal controls, and other detail work. Prepares a share of the audit working papers and participates in drafting reports. In moderately complex audits, may assist in selecting appropriate tests, samples, and methods commonly applied by the firm and may serve as primary assistant to the accountant in charge. In more complicated audits concentrates on detail work. Occasionally may be in charge of small, uncomplicated audits which require only one or two other subordinate accountants. Personal contacts usually involve only the exchange of factual technical information and are usually limited to the client's operating accounting staff and department heads.

## **Public Accountant III**

*General characteristics.* At this level the public accountant



is in charge of complete audit and may lead a team of several subordinates. Audits are usually accomplished one at a time and are typically carried out at a single location. The firms audited are typically moderately complex and there is usually previous audit experience by the firm. The audit conforms to standard procedural guidelines, but is often tailored to fit the client's business activities. Routine procedures and techniques are sometimes inadequate and require adaptation. Necessary data are not always readily available. When assigned to more difficult and complex audits (see level IV), the accountant may run the audit of a major component or serve as the primary assistant to the accountant in charge.

*Direction received.* Works under the general supervision of a higher level public accountant who oversees the operation of the audit. Work is performed independently, applying generally accepted accounting principles and auditing standards, but assistance on difficult technical matters is available. Work may be checked occasionally during progress for appropriateness and adherence to time requirements, but routine analyses, methods, techniques, and procedures applied at the work site are expected to be correct.

*Typical duties and responsibilities.* Is responsible for carrying out the technical features of the audit, leading team members and personally performing the most difficult work. Carries out field work in accordance with the general format prescribed in the audit program, but selects specific methods and types and sizes of samples and tests. Assigns work to team members, furnishes guidance, and adjusts workloads to accommodate daily priorities. Thoroughly reviews work performed for technical accuracy and adequacy. Resolves anticipated problems within established guidelines and priorities but refers problems of unusual difficulty to superiors for discussion and advice. Drafts financial statements, final reports, management letters, and other closing memoranda. Discusses significant recommendations with superiors and may serve as technical resource at "closing" meetings with clients. Personal contacts are usually with chief accountants and assistant controllers of medium size companies and divisions of large corporations to explain and interpret policies and procedures governing the audit process.

## Public Accountant IV

*General characteristics.* At this level the public accountant directs field work including difficult audits, e.g., those involving initial audits of new clients, acquisitions, or stock registrations—and may oversee a large audit team split between several locations. The audit team usually includes one or more level III public accountants who handle major components of the audit. The audits are complex and clients typically include those engaged in projects which span accounting periods; highly regulated industries which have various external reporting requirements; publicly held

corporations; or businesses with very high dollar or transaction volume. Clients are frequently large with a variety of operations which may have different accounting systems. Guidelines may be general or lacking and audit programs are intricate, often requiring extensive tailoring to meet atypical or novel situations.

*Direction received.* Works under general supervision. The supervisor sets overall objectives and resource limits but relies on the accountant to fully plan and direct all technical phases of the audit. Issues not covered by guidelines or known precedents are discussed with the supervisor, but the accountant's recommended approaches and courses of action are normally approved. Work is reviewed for soundness of approach, completeness, and conformance with established policies of the firm.

*Typical duties and responsibilities.* Is responsible for carrying out the operational and technical features of the audit, directing the work of team members, and personally performing the most difficult work. Often participates in the development of the audit scope, and drafts complicated audit programs with a large number of concurrently executed phases. Independently develops audit steps and detailed procedures, deviating from traditional methods to the extent required. Makes program adjustments as necessary once an audit has begun; selects specific methods, types and sizes of samples, the extent to which discrepancies need to be investigated, and the depth of required analyses. Resolves most operational difficulties and unanticipated problems.

Assigns work to team members; reviews work for appropriateness, conformance to time requirements, and adherence to generally accepted accounting principles and auditing standards. Consolidates working papers, draft reports, and findings; and prepares financial statements, management letters, and other closing memoranda for management approval. Participates in "closing" meetings as a technical resource and may be called upon to sell or defend controversial and critical observations and recommendations. Personal contacts are extensive and typically include top executives of smaller clients and mid- to upper-level financial and management officers of large corporations, e.g., assistant controllers or controllers. Such contacts involve coordinating and advising on work efforts and resolving operating problems.

*NOTE:* Excluded from this level are public accountants who direct field work associated with the complete range of audits undertaken by the firm, lead the largest and most difficult audits, and who frequently oversee teams performing concurrent audits. This type of work requires extensive knowledge of one or more industries to make subjective determinations on questions of tax, law, accounting, and business practices. Audits may be complicated by such factors as: The size and diversity of the client organizations (e.g., multinational corporations and conglomerates with a

large number of separate and distinct subsidiaries); accounting issues where precedents are lacking or in conflict; and, in some cases, clients who are encountering substantial financial difficulties. They perform most work without technical supervision and completed audits are reviewed

mainly for propriety of recommendations and conformance with general policies of the firm. Also excluded are public accountants whose principal function is to manage, rather than perform accounting work, and the equity owners of the firm who have final approval authority.

## Personnel Management

### JOB ANALYST

Performs work involved in collecting, analyzing, and developing occupational data relative to jobs, job qualifications, and worker characteristics as a basis for compensating employees in a fair equitable, and uniform manner. Performs such duties as studying and analyzing jobs and preparing description of duties and responsibilities and of the physical and mental requirements needed by workers; evaluating jobs and determining appropriate wage or salary levels in accordance with their difficulty and responsibility, independently conducting or participating with representatives of other companies in conducting compensation surveys within a locality or labor market area; assisting in administering merit rating programs; reviewing changes in wages and salaries indicated by surveys and recommending changes in pay scales; and auditing individual jobs to check the propriety of evaluations and to apply current job classifications. (Positions also responsible for supplying management with a high technical level of advice regarding the solution of broad personnel management problems should be excluded.)

#### Job Analyst I

As a trainee, performs work in designated areas and of limited occupational scope. Receives immediate supervision in assignments designed to provide training in the application of established methods and techniques of job analysis. Studies the least difficult jobs and prepares reports for review by a job analyst of higher level.

#### Job Analyst II

Studies, describes, and evaluates jobs in accordance with established procedures. Is usually assigned to the simpler kinds of both wage and salaried jobs in the establishment. Works independently on such assignments but is limited by defined areas of assignment and instructions of superior.

#### Job Analyst III

Analyzes and evaluates a variety of wage and salaried

jobs in accordance with established evaluation systems and procedures. May conduct wage surveys within the locality or participate in conducting surveys of broad compensation areas. May assist in developing survey methods and plans. Receives general supervision but responsibility for final action is limited.

#### Job Analyst IV

Analyzes and evaluates a variety of jobs in accordance with established evaluation systems and procedures, and is given assignments which regularly include responsibility for the more difficult kinds of jobs. ("More difficult" means jobs which consist of hard-to-understand work processes; e.g., professional, scientific, administrative, or technical; *or* jobs in new or emerging occupational fields; *or* jobs which are being established as part of the creation of new organizations; *or* where other special considerations of these types apply.) Receives general supervision, but responsibility for final action is limited. May participate in the development and installation of evaluation or compensation systems, which may include those for merit rating programs. May plan survey methods and conduct or direct wage surveys within a broad compensation area.

### DIRECTOR OF PERSONNEL

Directs a personnel management program for a company or a segment of a company. Serves top management officials of the organization as the source of advice and assistance on personnel management matters and problems generally; is typically consulted on the personnel implications of planned changes in management policy or program, the effects on the organization of economic or market trends, product or production method changes, etc.; represents management in contacts with other companies, trade associations, government agencies, etc., dealing primarily with personnel management matters.

Typically the director of personnel for a company reports to a company officer in charge of industrial relations and personnel management activities or an officer of similar level. Below the company level the director of personnel typically reports to a company officer or a

high management official who has responsibility for the operation of a plant, establishment, or other segment of the company.

For a job to be covered by this definition, the personnel management program *must include* responsibility for *all three* of the following functions:

1. *Administering a job evaluation system:* i.e., a system in which there are established procedures by which jobs are analyzed and evaluated on the basis of their duties, responsibilities, and qualification requirements in order to provide a foundation for equitable compensation. Typically, such a system includes the use of one or more sets of job evaluation factors and the preparation of formal job descriptions. It may also include such related functions as wage and salary surveys or merit rating system administration. The job evaluation system(s) does not necessarily cover all jobs in the organization, but does cover a substantial portion of the organization.

2. *Employment and placement function:* i.e., recruiting activity for at least some kinds of workers through a variety of sources (e.g., schools or colleges, employment agencies, professional societies, etc.); evaluating applicants against demands of particular jobs by use of such techniques as job analysis to determine requirements, interviews, written tests of aptitude, knowledge, or skill, reference checks, experience evaluations, etc.; recommending selections and job placements to management, etc.

3. *Employee relations and services function:* i.e., functions designed to maintain employees' morale and productivity at a high level (for example, administering a formal or informal grievance procedure; identifying and recommending solutions for personnel problems such as absenteeism, high turnover, low productivity, etc.; administration of beneficial suggestions system, retirement, pension, or insurance plans, merit rating system, etc.; overseeing cafeteria operations, recreational programs, industrial health and safety programs, etc.).

In addition, positions covered by this definition may, but do not necessarily, include responsibilities in the following areas:

*Employee training and development;*

*Labor relations activities* which are confined mainly to the administration, interpretation, and application of those aspects of labor union contracts that are essentially of the type described under (3) above. May also participate in bargaining of a subordinate nature, e.g. to negotiate detailed settlement of such matters as specific rates, job classifications, work rules, hiring or layoff procedures, etc., within the broad terms of a general agreement reached at higher levels, or to supply advice and information on technical points to the company's principal representative;

*Equal employment opportunity (EEO);*

*Reporting under the Occupational Safety and Health Act (OSHA).*

**Table C-2. Criteria for matching directors of personnel by level**

Number of employees in work force serviced	"Operations level" personnel program <sup>1</sup>		Number of employees in work force serviced	"Development level" personnel program <sup>2</sup>	
	"Type A" organization serviced <sup>3</sup>	"Type B" organization serviced <sup>4</sup>		"Type A" organization serviced <sup>3</sup>	"Type B" organization serviced <sup>4</sup>
250-750 .....	I	II	250-750 .....	II	III
1,000-5,000 .....	II	III	1,000-5,000 .....	III	IV
6,000-12,000 .....	III	IV	6,000-12,000 .....	IV	V
15,000-25,000 .....	IV	V	15,000-25,000 .....	V	-

<sup>1</sup> "Operations level" personnel program—director of personnel servicing an organizational segment (e.g., a plant) of a company, where the basic personnel program policies, plans, objectives, etc., are established at company headquarters or at some other higher level between the plant and the company headquarters level. The personnel director's responsibility is to put these into operation at the local level, in such a manner as to most effectively serve the local management needs.

<sup>2</sup> "Development level" personnel program—either:

(a) Director of personnel servicing an entire company (with or without subordinate establishments) where the personnel director plays an important role in establishment of basic personnel policies, plans, objectives, etc., for the company subject to policy direction and control from company officers, or (b) director of personnel servicing an intermediate organization below the company level, e.g., a division or a subsidiary, to which a relatively complete delegation of personnel program planning and development responsibility is made. In this situation only basic policy direction is given by the parent company and local officers. The director of personnel has essentially the same degree of latitude and responsibility for establishment of basic personnel policies, plans, objectives, etc., as described above in (a).

<sup>3</sup> "Type A" organization serviced—most jobs serviced do not present particularly difficult or unusual recruitment, job evaluation,

or training problems because the jobs consist of relatively easy-to-understand work processes, and an adequate labor supply is available. These conditions are most likely to be found in organizations in which the work force and organizational structure are relatively stable.

<sup>4</sup> "Type B" organization serviced—a substantial proportion of the jobs present difficult recruitment, job evaluation, or training problems because the jobs: consist of hard-to-understand work processes (e.g., professional, scientific, administrative, or technical); have hard-to-match skill requirements; are in new or emerging occupations; or are extremely hard to fill. These conditions are most likely to be found in organizations in which the work force, organizational structure, work processes or functions, etc., are complicated or unstable.

NOTE: There are gaps between different degrees of all three elements used to determine job level matches. These gaps have been provided purposely to allow room for judgment in getting the best overall job level match for each job. Thus, a job which services a work force of 850 employees should be matched with level II if it is a personnel program operations level job where the nature of the organization serviced seems to fall slightly below the definition for type B. However, the same job should be matched with level I if the nature of the organization serviced clearly falls well within the definition for type A.

*Excluded* are positions in which responsibility for actual contract negotiation with labor unions as the principal company representative is a significant aspect of the job, i.e., a responsibility which serves as a primary basis for qualification requirements and compensation.

Director of personnel jobs which meet the above definition are classified by level<sup>2</sup> in accordance with the criteria shown in table C-2.

<sup>2</sup> Insufficient data were obtained for level V to warrant presentation of average salaries.

## Attorneys

### ATTORNEY

Performs consultation and advisory work and carries out the legal processes necessary to effect the rights, privileges, and obligations of the company. The work performed requires completion of law school with an LL.B. degree (or the equivalent) and admission to the bar. *Responsibilities or functions include one or more of the following or comparable duties:*

Preparing and reviewing various legal instruments and documents, such as contracts, leases, licenses, purchases, sales, real estate, etc.;

Acting as agent of the company in its transactions;

Examining material (e.g., advertisements, publications, etc.) for legal implications; advising officials of proposed legislation which might affect the company;

Applying for patents, copyrights, or registration of company's products, processes, devices, and trademarks;

Advising whether to initiate or defend lawsuits;

Conducting pre-trial preparations; defending the company in lawsuits; and

Advising officials on tax matters, government regulations, and/or corporate rights.

*Excluded* from this definition are:

Patent work which requires professional training in addition to legal training (typically a degree in engineering or in a science);

Claims examining, claims investigating, or similar work for which professional legal training and bar membership is not essential;

Attorneys, frequently titled "general counsel" (and their immediate full associates or deputies), who serve as company officers or the equivalent and are responsible for participating in the overall management and formulation of policy for the company in addition to directing its legal work. (The duties and responsibilities of such positions exceed level VI as described below.)

Attorney jobs which meet the above definition are to be classified in accordance with table C-3 and the definitions which follow.

### Difficulty

*D-1.* Legal questions are characterized by: Facts that are well established; clearly applicable legal precedents; and matters not of substantial importance to the organization. (Usually relatively limited sums of money, e.g., a few thousand dollars, are involved.)

*Examples of D-1 work:*

Legal investigation, negotiation, and research prepara-

tory to defending the organization in potential or actual lawsuits involving alleged negligence where the facts can be firmly established and there are precedent cases directly applicable to the situation.

Searching case reports, legal documents, periodicals, textbooks, and other legal references, and preparing draft opinions on employee compensation or benefit questions when there is a substantial amount of clearly applicable statutory, regulatory, and case material.

Drawing up contracts and other legal documents in connection with real property transactions requiring the development of detailed information but *not* involving serious questions regarding titles to property or other major factual or legal issues.

*D-2.* Legal work is regularly difficult by reason of one or more of the following: The absence of clear and directly applicable legal precedents; the different possible interpretations that can be placed on the facts, the laws, or the precedents involved; the substantial importance of the legal matters to the organization (e.g., sums as large as \$100,000 are generally directly or indirectly involved); the matter is being strongly pressed or contested in formal proceedings or in negotiations by the individuals, corporations, or government agencies involved.

*Examples of D-2 work:*

Advising on the legal implications of advertising representations when the facts supporting the representations and the applicable precedent cases are subject to different interpretations.

Reviewing and advising on the implications of new or revised laws affecting the organization.

Presenting the organization's defense in court in a negligence lawsuit which is strongly pressed by counsel for an organized group.

Providing legal counsel on tax questions complicated by the absence of precedent decisions that are directly applicable to the organization's situation.

*D-3.* Legal work is typically complex and difficult because of one or more of the following: The questions are unique and require a high order of original and creative legal endeavor for their solution; the questions require extensive research and analysis and the obtaining and evaluation of expert testimony regarding controversial issues in a scientific, financial, corporate organization, engineering, or other highly technical area; the legal matter is of critical importance to the organization and is being vigorously pressed or contested (e.g., sums such as \$1 million or more are generally directly or indirectly involved).

*Examples of D-3 work:*

Advising on the legal aspects and implications of Federal antitrust laws to projected greatly expanded market-

**Table C-3. Criteria for matching attorneys by level**

Level	Difficulty of legal work <sup>1</sup>	Responsibility of job <sup>1</sup>	Experience required
I	This is the entry level. The duties and responsibilities after initial orientation and training are those described in D-1 and R-1.		Completion of law school with an LL.B. or J.D. degree plus admission to the bar.
II	D-1 <i>or</i> D-2	R-2  R-1	Sufficient professional experience (at least 1 year, usually more) at the "D-1" level to assure competence as an attorney.
III	D-2 <i>or</i> D-3	R-2  R-1	At least 1 year, usually more, of professional experience at the "D-2" level.
IV	D-2 <i>or</i> D-3	R-3  R-2	Extensive professional experience at the "D-2" or a higher level.
V	D-3	R-3	Extensive professional experience at the "D-3" level.
VI	D-3	R-4	Extensive professional experience at the "D-3" and "R-3" levels.

<sup>1</sup>D-1, -2, -3 and R-1, -2, -3, and -4 are explained in the accompanying text.

ing operations involving joint ventures with several other organizations.

Planning legal strategy and representing a utility company in rate or government franchise cases involving a geographic area including parts or all of several States.

Preparing and presenting a case before an appellate court where the case is highly important to the future operation of the organization and is vigorously contested by very distinguished (e.g., having a broad regional or national reputation) legal talent.

Serving as the principal counsel to the officers and staff of an insurance company on the legal problems in the sale, underwriting, and administration of group contracts involving nationwide or multistate coverages and laws.

Performing the principal legal work in a nonroutine major revision of the company's charter or in effectuating new major financing steps.

## Responsibility

*R-1.* Responsibility for final action is usually limited to matters covered by legal precedents and in which little deviation from standard practice is involved. Any decisions or actions having a significant bearing on the organization's business are reviewed. (Is given guidance in the initial stages of assignment, e.g., in planning and organizing legal research and studies. Assignments are then carried out with moderate independence although guidance is generally available and is sought from time to time on problem points.)

*R-2.* Usually works independently in investigating the facts, searching legal precedents, defining the legal and factual

issues, drafting necessary legal documents, and developing conclusions and recommendations. Decisions having an important bearing on the organization's business are reviewed. (Receives information from supervisor regarding unusual circumstances or important policy considerations pertaining to a legal problem. If trials are involved, may receive guidance from a supervisor regarding presentation, line of approach, possible line of opposition to be encountered, etc. In the case of nonroutine written presentations the final product is reviewed carefully, but primarily for overall soundness of legal reasoning and consistency with organization policy. Some (but not all) attorneys make assignments to one or more lower level attorneys, aids, or clerks.)

*R-3.* Carries out assignments independently and makes final legal determinations in matters of substantial importance to the organization. Such determinations are subject to review only for consistency with company policy, possible precedent effect, and overall effectiveness. To carry out assignments, deals regularly with company officers and top level management officials and confers or negotiates regularly with senior attorneys and officials in other companies or in government agencies on various aspects of assigned work. (Receives little or no preliminary instruction on legal problems and a minimum of technical legal supervision. May assign and review work of a few attorneys, but this is not a primary responsibility.)

*R-4.* Carries out assignments which entail independently planning investigations and negotiations on legal problems of the highest importance to the organization and develop-

ing completed briefs, opinions, contracts, or other legal products. To carry out assignments, represents the organization at conferences, hearings, or trials and personally confers and negotiates with top attorneys and top-ranking officials in private companies or in government agencies. On various aspects of assigned work may give advice directly and personally to corporation officers and top level managers, or may work through the general counsel of the company in advising officers. (Generally receives no preliminary instruction on legal problems. On matters requiring the concentrated efforts of several attorneys or other specialists, is responsible for directing, coordinating, and reviewing the work of the attorneys involved.)

OR

As a primary responsibility, directs the work of a staff of attorneys, one, but usually more, of whom regularly perform D-3 legal work. With respect to the work directed, gives advice directly to corporation officers and top managerial officers, or may give such advice through the general counsel. (Receives guidance as to organization policy but no technical supervision or assistance except when requesting advice from, or briefing by, the general counsel on the overall approach to the most difficult, novel, or important legal questions. Usually reports to the general counsel or deputy.)

## Buyers

### BUYER

Purchases materials, supplies, equipment, and services (e.g., utilities, maintenance, and repair). In some instances items are of types that must be specially designed, produced, or modified by the vendor in accordance with drawings or engineering specifications.

Solicits bids, analyzes quotations received, and selects or recommends supplier. May interview prospective vendors. Purchases items and services at the most favorable price consistent with quality, quantity, specification requirements, and other factors. Prepares or supervises preparation of purchase orders from requisitions. May expedite delivery and visit vendors' offices and plants.

Normally, purchases are unreviewed when they are consistent with past experience, and are in conformance with established rules and policies. Proposed purchase transactions that deviate from the usual or from past experience in terms of prices, quality of items, quantities, etc., or that may set precedents for future purchases, are reviewed by higher authority prior to final action.

In addition to the work described above, some (but not all) buyers direct the work of one or a few clerks who perform routine aspects of the work. As a secondary and subsidiary duty, some buyers may also sell or dispose of surplus, salvage, or used materials, equipment, or supplies.

*NOTE:* Some buyers are responsible for the purchasing of a variety of items and materials. When the variety includes items and work described at more than one of the following levels, the position should be considered to equal the highest level that characterizes at least a substantial portion of the buyer's time.

*Excluded are:*

- a. Buyers of items for direct sale, either wholesale or retail;
- b. Brokers and dealers buying for clients or for investment purposes;
- c. Positions that specifically require professional edu-

cation and qualifications in a physical science or in engineering (e.g., chemist, mechanical engineer);

d. Buyers who specialize in purchasing a single or a few related items of highly variable quality such as raw cotton or wool, tobacco, cattle, or leather for shoe uppers, etc. Expert personal knowledge of the item is required to judge the relative value of the goods offered and to decide the quantity, quality, and price of each purchase in terms of its probable effect on the organization's profit and competitive status;

e. Buyers whose principal responsibility is the supervision of other buyers or the management, direction, or supervision of a purchasing program;

f. Persons predominantly concerned with contract or subcontract administration;

g. Persons whose major duties consist of ordering, reordering, or requisitioning items under existing contracts; and

h. Positions restricted to clerical functions or to purchase expediting work.

### Buyer I

Purchases "off-the-shelf" types of readily available, commonly used materials, supplies, tools, furniture, services, etc.

Transactions usually involve local retailers, wholesalers, jobbers, and manufacturers' sales representatives.

Quantities purchased are generally small amounts, e.g., those available from local sources.

*Examples* of items purchased include: Common stationery and office supplies; standard types of office furniture and fixtures; standard nuts, bolts, screws; janitorial and common building maintenance supplies; and common building maintenance or common utility services or office machine repair services.

### Buyer II

Purchases "off-the-shelf" types of standard, generally available technical items, materials, and services. Transactions may involve occasional modification of standard and common usage items, materials, and services, and include a

few stipulations about unusual packing, marking, shipping, etc.

Transactions usually involve dealing directly with manufacturers, distributors, jobbers, etc.

Quantities of items and materials purchased may be relatively large particularly in the case of contracts for continuing supply over a period of time.

May be responsible for locating or promoting possible new sources of supply. Usually is expected to keep abreast of market trends, changes in business practices in the assigned markets, new or altered types of materials entering the market, etc.

*Examples* of items purchased include: Industrial types of handtools; standard electronic parts, components and component test instruments; electric motors; gasoline service station equipment; PBX or other specialized telephone services; special purpose printing services; and routine purchases of common raw materials such as standard grades and sizes of steel bars, rods, and angles.

Also included at this level are buyers of materials of the types described for buyer I when the quantities purchased are large so that local sources of supply are generally inadequate and the buyer must deal directly with manufacturers on a broader than local scale.

### **Buyer III**

Purchases items, materials, or services of a technical and specialized nature. The items, while of a common general type, are usually made, altered, or customized to meet the user's specific needs and specifications.

Transactions usually require dealing with manufacturers. The number of potential vendors is likely to be small and price differentials often reflect important factors (quality, delivery dates and places, etc.) that are difficult to evaluate.

The quantities purchased of any item or service may be large.

Many of the purchases involve one or more of such complications as: Specifications that detail, in technical terms, the required physical, chemical, electrical, or other comparable properties; special testing prior to acceptance; grouping of items for lot bidding and awards; specialized processing, packing, or packaging requirements; export packs; overseas port differentials; etc.

Is expected to keep abreast of market and product developments. May be required to locate new sources of supply.

Some positions may involve *assisting* in the training or supervising of lower level buyers or clerks.

*Examples* of items purchased include: Castings; special extruded shapes of normal size and material;

special formula paints; electric motors of special shape or speeds; production equipment; special packaging of items; and raw materials in substantial quantities or with special characteristics.

### **Buyer IV**

Purchases highly complex and technical items, materials, or services, usually those specially designed and manufactured exclusively for the purchaser.

Transactions require dealing with manufacturers and often involve persuading potential vendors to undertake the manufacturing of custom-designed items according to complex and rigid specifications.

Quantities of items and materials purchased are often large in order to satisfy the requirements for an entire large organization for an extended period of time. Complex schedules of delivery are often involved. Buyer determines appropriate quantities to be contracted for at any given period of time.

Transactions are often complicated by the presence of one or more such matters as inclusion of: Requirements for spare parts, preproduction samples and testing, or technical literature; or patent and royalty provisions.

Keeps abreast of market and product developments. Develops new sources of supply.

In addition to the work described above, a few positions may also require supervision over a few lower level buyers or clerks. (No position is included in this level *solely* because supervisory duties are performed.)

*Examples* of items purchased include: Special purpose high cost machine tools and production facilities; specialized condensers, boilers, and turbines; raw materials of critically important characteristics or quality; parts, subassemblies, components, etc., specially designed and made to order (e.g., communications equipment for installation in aircraft being manufacturer; component assemblies for missiles and rockets; and motor vehicle frames).

*NOTE: Excluded* are buying positions above level IV. Some buyers above level IV make purchases in such unusually large quantities that they can affect the market price of a commodity or produce other significant effects on the industry or trade concerned. Others may purchase items of either (1) extraordinary technical complexity, e.g., involving the outermost limits of science or engineering, or (2) unusually high individual or unit value. Such buyers often persuade suppliers to expand their plants or convert facilities to the production of new items or services. These types of buying functions are often performed by program managers or company officials who have primary responsibilities other than buying.

# Chemists and Engineers

## CHEMIST

Performs professional work in research, development, interpretation, and analysis to determine the composition, molecular structure, and properties of substances; to develop or investigate new materials and processes; and to investigate the transformations which substances undergo. Work typically requires a B.S. degree in chemistry or the equivalent in appropriate and substantial college level study of chemistry plus experience.

### Chemist I

*General characteristics.* This is the entry level of professional work requiring a bachelor's degree in chemistry and no experience, or the equivalent of a degree in appropriate education and experience. Performs assignments designed to develop professional capabilities and to provide experience in the application of training in chemistry as it relates to the company's programs. May also receive formal classroom or seminar type training. (Terminal positions are excluded.)

*Direction received.* Works under close supervision. Receives specific and detailed instructions as to required tasks and results expected. Work is checked during progress, and is reviewed for accuracy upon completion.

*Typical duties and responsibilities.* Performs a variety of routine tasks that are planned to provide experience and familiarization with the chemistry staff, methods, practices, and programs of the company. The work includes a variety of routine qualitative and quantitative analyses; physical tests to determine properties such as viscosity, tensile strength, and melting point; and assisting more experienced chemists to gain additional knowledge through personal observation and discussion.

*Responsibility for the direction of others.* Usually none.

### Chemist II

*General characteristics.* At this continuing developmental level, performs routine chemical work requiring selection and application of general and specialized methods, techniques, and instruments commonly used in the laboratory, and the ability to carry out instructions when less common or proposed methods or procedures are necessary. Requires work experience acquired in an entry level position, or appropriate graduate level study. For training and developmental purposes, assignments may include some work that is typical of a higher level. (Terminal positions are excluded.)

*Direction received.* Supervisor establishes the nature and extent of analysis required, specifies methods and criteria on new types of assignments, and reviews work for thoroughness of application of methods and accuracy of results.

*Typical duties and responsibilities.* Carries out a wide variety of standardized methods, tests, and procedures. In accordance with specific instructions may carry out proposed and less common ones. Is expected to detect problems in using standardized procedures because of the condition of the sample, difficulties with the equipment, etc. Recommends modifications of procedures, e.g., extending or curtailing the analysis or using alternate procedures, based on knowledge of the problem and pertinent available literature. Conducts specified phases of research projects as an assistant to an experienced chemist.

*Responsibility for the direction of others.* May be assisted by a few aids or technicians.

### Chemist III

*General characteristics.* Performs a broad range of chemical tests and procedures utilized in the laboratory, using judgment in the independent evaluation, selection, and adaptation of standard methods and techniques. May carry through a complete series of tests on a product in its different process stages. Some assignments require a specialized knowledge of one or two common categories of related substances. Performance at this level requires developmental experience in a professional position, or equivalent graduate level education.

*Direction received.* On routine work, supervision is very general. Assistance is furnished on unusual problems and work is reviewed for application of sound professional judgment.

*Typical duties and responsibilities.* In accordance with instructions as to the nature of the problem, selects standard methods, tests or procedures; when necessary, develops or works out alternate or modified methods with supervisor's concurrence. Assists in research by analyzing samples or testing new procedures that require specialized training because (a) standard methods are inapplicable, (b) analytical findings must be interpreted in terms of compliance or non-compliance with standards, or (c) specialized and advanced equipment and techniques must be adapted.

*Responsibility for the direction of others.* May supervise or coordinate the work of a few technicians or aids, and be assisted by lower level chemists.



## Chemist IV

*General characteristics.* As a fully competent chemist in all conventional aspects of the subject matter or the functional area of the assignments, plans and conducts work requiring (a) mastery of specialized techniques or ingenuity in selecting and evaluating approaches to unforeseen or novel problems, and (b) ability to apply a research approach to the solution of a wide variety of problems and to assimilate the details and significance of chemical and physical analyses, procedures, and tests. Requires sufficient professional experience to assure competence as a fully trained worker; or, for positions primarily of a research nature, completion of all requirements for a doctoral degree may be substituted for experience.

*Direction received.* Independently performs most assignments with instructions as to the general results expected. Receives technical guidance on unusual or complex problems and supervisory approval on proposed plans for projects.

*Typical duties and responsibilities.* Conducts laboratory assignments requiring the determination and evaluation of alternative procedures and the sequence of performing them. Performs complex, exacting, unusual analytical assignments requiring specialized knowledge of techniques or products. Interprets results, prepares reports, and may provide technical advice in specialized area.

*Responsibility for the direction of others.* May supervise a small staff of chemists and technicians.

## Chemist V

*General characteristics.* Participates in planning laboratory programs on the basis of specialized knowledge of problems and methods and probable value of results. May serve as an expert in a narrow specialty (e.g., class of chemical compounds, or a class of products), making recommendations and conclusions which serve as the basis for undertaking or rejecting important projects. Development of the knowledge and expertise required for this level of work usually reflects progressive experience through chemist IV.

*Direction received.* Supervision and guidance relate largely to overall objectives, critical issues, new concepts, and policy matters. Consults with supervisor concerning unusual problems and developments.

*Typical duties and responsibilities.* One or both of the following: (1) In a supervisory capacity, plans, organizes, and directs assigned laboratory programs. Independently defines scope and critical elements of the projects and selects approaches to be taken. A substantial portion of the work

supervised is comparable to that described for chemist IV. (2) As individual researcher or worker, carries out projects requiring development of new or highly modified scientific techniques and procedures, extensive knowledge of specialty, and knowledge of related scientific fields.

*Responsibility for the direction of others.* Supervises, coordinates, and reviews the work of a small staff of chemists and technicians engaged in varied research and development projects, or a larger group performing routine analytical work. Estimates personnel needs and schedules and assigns work to meet completion date. Or, as individual researcher or worker, may be assisted on projects by other chemists or technicians.

## Chemist VI

*General characteristics.* Performs work requiring leadership and expert knowledge in a specialized field, product, or process. Formulates and conducts a systematic attack on a problem area of considerable scope and complexity which must be approached through a series of complete and conceptually related studies, or a number of projects of lesser scope. The problems are complex because they are difficult to define and require unconventional or novel approaches or have other difficult features. Maintains liaison with individuals and units within and outside the organization, with responsibility for acting independently on technical matters pertaining to the field. Work at this level usually requires extensive progressive experience including work comparable to chemist V.

*Direction received.* Supervision received is essentially administrative, with assignments given in terms of broad general objectives and limits.

*Typical duties and responsibilities.* One or both of the following: (1) In a supervisory capacity (a) plans, develops, coordinates, and directs a number of large and important projects or a project of major scope and importance, or (b) is responsible for the entire chemical program of a company, when the program is of limited complexity and scope. Activities supervised are of such a scope that they require a few (3 to 5) subordinate supervisors or team leaders with at least one in a position comparable to level V. (2) As individual researcher or worker determines, conceives, plans, and conducts projects of major importance to the company. Applies a high degree of originality and ingenuity in adapting, extending, and synthesizing existing theory, principles, and techniques into original combinations and configurations. May serve as a consultant to other chemists in specialty.

*Responsibility for the direction of others.* Plans, organizes, and supervises the work of a staff of chemists and technicians. Evaluates progress of the staff and results obtained,

and recommends major changes to achieve overall objectives. Or, as individual worker or researcher, may be assisted on individual projects by other chemists or technicians.

### Chemist VII

*General characteristics.* Makes decisions and recommendations that are recognized as authoritative and have an important impact on extensive chemical activities. Initiates and maintains extensive contacts with key chemists and officials of other organizations and companies, requiring skill in persuasion and negotiation of critical issues. At this level individuals will have demonstrated creativity, foresight, and mature judgment in anticipating and solving unprecedented chemical problems, determining program objectives and requirements, organizing programs and projects, and developing standards and guides for diverse chemical activities.

*Direction received.* Receives general administrative direction.

*Typical duties and responsibilities.* One or both of the following: (1) In a supervisory capacity is responsible for (a) an important segment of a chemical program of a company with extensive and diversified scientific requirements, or (b) the entire chemical program of a company where the program is more limited in scope. The overall chemical program contains critical problems the solution of which requires major technological advances and opens the way for extensive related development. Makes authoritative technical recommendations concerning the scientific objectives and levels of work which will be most profitable in light of company requirements and scientific and industrial trends and developments. Recommends facilities, personnel, and funds required. (2) As individual researcher and consultant, selects problems for research to further the company's objectives. Conceives and plans investigations in which the phenomena and principles are not adequately understood, and where few or contradictory scientific precedents or results are available for reference. Outstanding creativity and mature judgment are required to devise hypotheses and techniques of experimentation and to interpret results. As a leader and authority in the company, in a broad area of specialization, or in a narrow but intensely specialized one, advises the head of a large laboratory or company officials on complex aspects of extremely broad and important programs. Has responsibility for exploring, evaluating, and justifying proposed and current programs and projects and furnishing advice on unusually complex and novel problems in the specialty field. Typically will have contributed innovations (e.g., techniques, products, procedures) which are regarded as significant advances in the field.

*Responsibility for the direction of others.* Directs several subordinate supervisors or team leaders, some of whom are

in positions comparable to chemist VI; or, as individual researcher and consultant, may be assisted on individual projects by other chemists and technicians.

### Chemist VIII

*General characteristics.* Makes decisions and recommendations that are authoritative and have a far-reaching impact on extensive chemical and related activities of the company. Negotiates critical and controversial issues with top level chemists and officers of other organizations and companies. Individuals at this level have demonstrated a high degree of creativity, foresight, and mature judgment in planning, organizing, and guiding extensive chemical programs and activities of outstanding novelty and importance.

*Direction received.* Receives general administrative direction.

*Typical duties and responsibilities.* One or both of the following: (1) In a supervisory capacity is responsible for (a) the entire chemical program of a company which is of moderate scope, or (b) an important segment of a chemical program of a company with very extensive and highly diversified scientific requirements, where programs are of such complexity and scope that they are of critical importance to overall operations and include problems of extraordinary difficulty that have resisted solution. Decides the kind and extent of chemical programs needed to accomplish the objectives of the company, for choosing the scientific approaches, for planning and organizing facilities and programs, and for interpreting results. (2) As individual researcher and consultant formulates and guides the attack on problems of exceptional difficulty and marked importance to the company and/or industry. Problems are characterized by the lack of scientific precedents and source materials, or the lack of success of prior research and analysis so that their solution would represent an advance of great significance and importance. Performs advisory and consulting work for the company as a recognized authority for broad program areas of considerable novelty and importance. Has made contributions such as new products or techniques, development of processes, etc., which are regarded as major advances in the field.

*Responsibility for the direction of others.* Supervises several subordinate supervisors or team leaders some of whose positions are comparable to chemist VII, or individual researchers some of whose positions are comparable to chemist VII and sometimes chemist VIII. As an individual researcher and consultant may be assisted on individual projects by other chemists or technicians.<sup>3</sup>

*NOTE:* Individuals in charge of a company's chemical program may match any of several of the survey job levels, depending on the size and complexity of chemical programs. Excluded from the definition are: (1) Chemists in

<sup>3</sup> Insufficient data were obtained for level VIII to warrant presentation of average salaries.

charge of programs so extensive and complex (e.g., consisting of highly diversified or unusually novel products and procedures) that one or more subordinate supervisory chemists are performing at level VIII; (2) individuals whose decisions have direct and substantial effect on setting policy for the organization (included, however, are supervisors deciding the "kind and extent of chemical programs" within broad guidelines set at higher levels); (3) individual researchers and consultants who are recognized as national and/or international authorities and scientific leaders in very broad areas of scientific interest and investigation.

## ENGINEER

Performs professional work in research, development, design, testing, analysis, production, construction, maintenance, operation, planning, survey, estimating, application, or standardization of engineering facilities, systems, structures, processes, equipment devices, or materials requiring knowledge of the science and art by which materials, natural resources, and power are made useful. Work typically requires a B.S. degree in engineering or the equivalent in combined education and experience. (*Excluded* are: Safety engineers, industrial engineers, quality control engineers, sales engineers, and engineers whose primary responsibility is to be in charge of nonprofessional maintenance work.)

### Engineer I

*General characteristics.* This is the entry level of professional work requiring a bachelor's degree in engineering and no experience, or the equivalent of a degree in appropriate education and experience. Performs assignments designed to develop professional work knowledge and abilities. May also receive formal classroom or seminar-type training. (Terminal positions are excluded.)

*Direction received.* Works under close supervision. Receives specific and detailed instructions as to required tasks and results expected. Work is checked during progress and is reviewed for accuracy upon completion.

*Typical duties and responsibilities.* Performs a variety of routine tasks that are planned to provide experience and familiarization with the engineering staff, methods, practices, and programs of the company.

*Responsibility for the direction of others.* Usually none.

### Engineer II

*General characteristics.* At this continuing developmental level, performs routine engineering work requiring application of standard techniques, procedures, and criteria in car-

rying out a sequence of related engineering tasks. Limited exercise of judgment is required on details of work and in making preliminary selections and adaptations of engineering alternatives. Requires work experience acquired in an entry level position, or appropriate graduate level study. For training and developmental purposes, assignments may include some work that is typical of a higher level. (Terminal positions are excluded.)

*Direction received.* Supervisor screens assignments for unusual or difficult problems and selects techniques and procedures to be applied on nonroutine work. Receives close supervision on new aspects of assignments.

*Typical duties and responsibilities.* Using prescribed methods, performs specific and limited portions of a broader assignment of an experienced engineer. Applies standard practices and techniques in specific situations, adjusts and correlates data, recognizes discrepancies in results, and follows operations through a series of related detailed steps or processes.

*Responsibility for the direction of others.* May be assisted by a few aids or technicians.

### Engineer III

*General characteristics.* Independently evaluates, selects, and applies standard engineering techniques, procedures, and criteria, using judgment in making minor adaptations and modifications. Assignments have clear and specified objectives and require the investigation of a limited number of variables. Performance at this level requires developmental experience in a professional position, or equivalent graduate level education.

*Direction received.* Receives instructions on specific assignment objectives, complex features, and possible solutions. Assistance is furnished on unusual problems and work is reviewed for application of sound professional judgment.

*Typical duties and responsibilities.* Performs work which involves conventional types of plans, investigations, surveys, structures, or equipment with relatively few complex features for which there are precedents. Assignments usually include one or more of the following: Equipment design and development, test of materials, preparation of specifications, process study, research investigations, report preparation, and other activities of limited scope requiring knowledge of principles and techniques commonly employed in the specific narrow area of assignments.

*Responsibility for the direction of others.* May supervise or coordinate the work of drafters, technicians, and others who assist in specific assignments.

## Engineer IV

*General characteristics.* As a fully competent engineer in all conventional aspects of the subject matter or the functional area of the assignments, plans and conducts work requiring judgment in the independent evaluation, selection, and substantial adaptation and modification of standard techniques, procedures, and criteria. Devises new approaches to problems encountered. Requires sufficient professional experience to assure competence as a fully trained worker; or, for positions primarily of a research nature, completion of all requirements for a doctoral degree may be substituted for experience.

*Direction received.* Independently performs most assignments with instructions as to the general results expected. Receives technical guidance on unusual or complex problems and supervisory approval on proposed plans for projects.

*Typical duties and responsibilities.* Plans, schedules, conducts, or coordinates detailed phases of the engineering work in a part of a major project or in a total project of moderate scope. Performs work which involves conventional engineering practice but may include a variety of complex features such as conflicting design requirements, unsuitability of standard materials, and difficult coordination requirements. Work requires a broad knowledge of precedents in the specialty area and a good knowledge of principles and practices of related specialties.

*Responsibility for the direction of others.* May supervise a few engineers or technicians on assigned work.

## Engineer V

*General characteristics.* Applies intensive and diversified knowledge of engineering principles and practices in broad areas of assignments and related fields. Makes decisions independently on engineering problems and methods, and represents the organization in conferences to resolve important questions and to plan and coordinate work. Requires the use of advanced techniques and the modification and extension of theories, precepts, and practices of own field and related sciences and disciplines. The knowledge and expertise required for this level of work usually result from progressive experience, including work comparable to engineer IV.

*Direction received.* Supervision and guidance relate largely to overall objectives, critical issues, new concepts, and policy matters. Consults with supervisor concerning unusual problems and developments.

*Typical duties and responsibilities.* One or more of the following: (1) In a supervisory capacity plans, develops, coordi-

ates, and directs a large and important engineering project or a number of small projects with many complex features. A substantial portion of the work supervised is comparable to that described for engineer IV. (2) As individual researcher or worker carries out complex or novel assignments requiring the development of new or improved techniques and procedures. Work is expected to result in the development of new or refined equipment, materials, processes, products, and/or scientific methods. (3) As staff specialist develops and evaluates plans and criteria for a variety of projects and activities to be carried out by others. Assesses the feasibility and soundness of proposed engineering evaluation tests, products, or equipment when necessary data are insufficient or confirmation by testing is advisable. Usually performs as a staff advisor and consultant as to a technical specialty, a type of facility or equipment, or a program function.

*Responsibility for the direction of others.* Supervises, coordinates, and reviews the work of a small staff of engineers and technicians; estimates personnel needs and schedules and assigns work to meet completion date. Or, as individual researcher or staff specialist may be assisted on projects by other engineers or technicians.

## Engineer VI

*General characteristics.* Has full technical responsibility for interpreting, organizing, executing, and coordinating assignments. Plans and develops engineering projects concerned with unique or controversial problems which have an important effect on major company programs. This involves exploration of subject area, definition of scope and selection of problems for investigation, and development of novel concepts and approaches. Maintains liaison with individuals and units within or outside the organization, with responsibility for acting independently on technical matters pertaining to own field. Work at this level usually requires extensive progressive experience including work comparable to engineer V.

*Direction received.* Supervision received is essentially administrative, with assignments given in terms of broad general objectives and limits.

*Typical duties and responsibilities.* One or more of the following: (1) In a supervisory capacity (a) plans, develops, coordinates, and directs a number of large and important projects or a project of major scope and importance, or (b) is responsible for the entire engineering program of a company when the program is of limited complexity and scope. Extent of responsibilities generally requires a few (3 to 5) subordinate supervisors or team leaders with at least one in a position comparable to level V. (2) As individual researcher or worker conceives, plans, and conducts research in problem areas of considerable scope and com-

plexity. The problems must be approached through a series of complete and conceptually related studies, are difficult to define, require unconventional or novel approaches, and require sophisticated research techniques. Available guides and precedents contain critical gaps, are only partially related to the problem, or may be largely lacking due to the novel character of the project. At this level, the individual researcher generally will have contributed inventions, new designs, or techniques which are of material significance in the solution of important problems. (3) As a staff specialist serves as the technical specialist for the organization (division or company) in the application of advanced theories, concepts, principles, and processes for an assigned area of responsibility (i.e., subject matter, function, type of facility or equipment, or product). Keeps abreast of new scientific methods and developments affecting the organization for the purpose of recommending changes in emphasis of programs or new programs warranted by such developments.

*Responsibility for the direction of others.* Plans, organizes, and supervises the work of a staff of engineers and technicians. Evaluates progress of the staff and results obtained, and recommends major changes to achieve overall objectives. Or, as individual researcher or staff specialist may be assisted on individual projects by other engineers or technicians.

## Engineer VII

*General characteristics.* Makes decisions and recommendations that are recognized as authoritative and have an important impact on extensive engineering activities. Initiates and maintains extensive contacts with key engineers and officials of other organizations and companies, requiring skill in persuasion and negotiation of critical issues. At this level individuals will have demonstrated creativity, foresight, and mature engineering judgment in anticipating and solving unprecedented engineering problems, determining program objectives and requirements, organizing programs and projects and developing standards and guides for diverse engineering activities.

*Direction received.* Receives general administrative direction.

*Typical duties and responsibilities.* One or both of the following: (1) In a supervisory capacity is responsible for (a) an important segment of the engineering program of a company with extensive and diversified engineering requirements, or (b) the entire engineering program of a company when it is more limited in scope. The overall engineering program contains critical problems the solution of which requires major technological advances and opens the way for extensive related development. Extent of responsibilities generally requires several subordinate organizational segments or teams. Recommends facilities, personnel, and

funds required to carry out programs which are directly related with and directed toward fulfillment of overall company objectives. (2) As individual researcher and consultant is a recognized leader and authority in the company in a broad area of specialization or in a narrow but intensely specialized field. Selects research problems to further the company's objectives. Conceives and plans investigations of broad areas of considerable novelty and importance for which engineering precedents are lacking in areas critical to the overall engineering program. Is consulted extensively by associates and others, with a high degree of reliance placed on the incumbent's scientific interpretations and advice. Typically, will have contributed inventions, new designs, or techniques which are regarded as major advances in the field.

*Responsibility for the direction of others.* Directs several subordinate supervisors or team leaders, some of whom are in positions comparable to engineer VI; or, as individual researcher and consultant, may be assisted on individual projects by other engineers and technicians.

## Engineer VIII

*General characteristics.* Makes decisions and recommendations that are recognized as authoritative and have a far-reaching impact on extensive engineering and related activities of the company. Negotiates critical and controversial issues with top level engineers and officers of other organizations and companies. Individuals at this level demonstrate a high degree of creativity, foresight, and mature judgment in planning, organizing, and guiding extensive engineering programs and activities of outstanding novelty and importance.

*Direction received.* Receives general administrative direction.

*Typical duties and responsibilities.* One or both of the following: (1) In a supervisory capacity is responsible for (a) an important segment of a very extensive and highly diversified engineering program of a company, or (b) the entire engineering program of a company when the program is of moderate scope. The programs are of such complexity and scope that they are of critical importance to overall objectives, include problems of extraordinary difficulty that often have resisted solution, and consist of several segments requiring subordinate supervisors. Is responsible for deciding the kind and extent of engineering and related programs needed to accomplish the objectives of the company, for choosing the scientific approaches, for planning and organizing facilities and programs, and for interpreting results. (2) As individual researcher and consultant formulates and guides the attack on problems of exceptional difficulty and marked importance to the company or industry. Problems are characterized by their lack of scientific prece-

dents and source material, or lack of success of prior research and analysis so that their solution would represent an advance of great significance and importance. Performs advisory and consulting work for the company as a recognized authority for broad program areas or in an intensely specialized area of considerable novelty and importance.

*Responsibility for the direction of others.* Supervises several subordinate supervisors or team leaders some of whose positions are comparable to engineer VII, or individual researchers some of whose positions are comparable to engineer VII and sometimes engineer VIII. As an individual researcher and consultant may be assisted on individual projects by other engineers or technicians.

*NOTE:* Individuals in charge of a company's engineering program may match any of several of the survey job levels depending on the size and complexity of engineering programs. Excluded from the definition are: (1) Engineers in charge of programs so extensive and complex (e.g., consisting of research and development on a variety of complex products or systems with numerous novel components) that one or more subordinate supervisory engineers are performing at level VIII; (2) individuals whose decisions have direct and substantial effect on setting policy for the organization (included, however, are supervisors deciding the "kind and extent of engineering and related programs" within broad guidelines set at higher levels); (3) individual researchers and consultants who are recognized as national and/or international authorities and scientific leaders in very broad areas of scientific interest and investigation.

## Technical Support

### ENGINEERING TECHNICIAN

To be covered by these definitions, employees must meet *all* of the following criteria: (1) Provides semiprofessional technical support for engineers working in such areas as research, design, development, testing, or manufacturing process improvement. (2) Work pertains to electrical, electronic, or mechanical components or equipment. (3) Required to have some knowledge of science or engineering. (*Excludes* production or maintenance workers, quality control testers, craft workers, drafters, designers, and engineers.)

#### Engineering Technician I

Performs simple routine tasks under close supervision or from detailed procedures. Work is checked in process or on completion. Performs, at this level, one or a combination of such typical duties as:

- Assembles or installs equipment or parts requiring simple wiring, soldering, or connecting;

- Performs simple or routine tasks or tests such as tensile or hardness tests; operates and adjusts simple test equipment; records test data;

- Gathers and maintains specified records of engineering data such as tests, drawings, etc.; performs computations by substituting numbers in specified formulas; plots data and draws simple curves and graphs.

#### Engineering Technician II

Performs standardized or prescribed assignments involving a sequence of related operations. Follows standard work methods or explicit instructions; technical adequacy of routine work is reviewed on completion; nonroutine work may

also be reviewed in process. Performs, at this level, one or a combination of such typical duties as:

- Assembles or constructs simple or standard equipment or parts. May service or repair simple instruments or equipment;

- Conducts a variety of standardized tests; may prepare test specimens; sets up and operates standard test equipment; records test data;

- Extracts engineering data from various prescribed sources; processes the data following well-defined methods; presents the data in prescribed form.

#### Engineering Technician III

Performs assignments that are not completely standardized or prescribed. Selects or adapts standard procedures or equipment. Receives initial instructions, equipment requirements, and advice from supervisor or engineer; technical adequacy of completed work is checked. Performs, at this level, one or a combination of such typical duties as:

- Constructs components, subunits, or simple models or adapts standard equipment. May troubleshoot and correct malfunctions;

- Conducts various tests or experiments which may require minor modifications in test setups or procedures; selects, sets up, and operates standard test equipment and records test data;

- Extracts and compiles a variety of engineering data; processes or computes data using specified formulas and procedures. Performs routine analysis to check applicability, accuracy, and reasonableness of data.

#### Engineering Technician IV

Performs nonroutine assignments of substantial variety and complexity. Receives objectives and technical advice

from supervisor or engineer; work is reviewed for technical adequacy. May be assisted by lower level technicians. Performs, at this level, one or a combination of such typical duties as:

- Works on limited segment of development project; constructs experimental or prototype models to meet engineering requirements; conducts tests or experiments; records and evaluates data and reports findings;

- Conducts tests or experiments requiring selection and adaptation or modification of test equipment and test procedures; records data; analyzes data and prepares test reports;

- Compiles and computes a variety of engineering data; may analyze test and design data; develops or prepares schematics, designs, specifications, parts lists, or makes recommendations regarding these items. May review designs or specifications for adequacy.

### **Engineering Technician V**

Performs nonroutine and complex assignments involving responsibility for planning and conducting a complete project of relatively limited scope or a portion of a larger and more diverse project. Selects and adapts plans, techniques, designs, or layouts. May coordinate portions of overall assignments; reviews, analyzes, and integrates the technical work of others. Supervisor or professional engineer outlines objectives, requirements, and design approaches; completed work is reviewed for technical adequacy and satisfaction of requirements. May be assisted by lower level technicians. Performs, at this level, one or a combination of such typical duties as:

- Designs, develops, and constructs major units, devices, or equipment; conducts tests or experiments; analyzes results and redesigns or modifies equipment to improve performance; reports results;

- Plans or assists in planning tests to evaluate equipment performance. Determines test requirements, equipment modification, and test procedures; conducts tests, analyzes and evaluates data, and prepares reports on findings and recommendations;

- Reviews and analyzes a variety of engineering data to determine requirements to meet engineering objectives; may calculate design data; prepares layouts, detailed specifications, parts lists, estimates, procedures, etc. May check and analyze drawings or equipment to determine adequacy of drawings and design.

### **DRAFTER**

Performs drafting work requiring knowledge and skill in drafting methods, procedures, and techniques. Prepares drawings of structures, mechanical and electrical equipment, piping and duct systems, and similar equipment, systems, and assemblies. Drawings are used to communicate engineering ideas, designs, and information in support of engineering functions. Uses recognized systems of symbols, legends, shadings, and lines having specific meaning in drawings.

The following are excluded when they constitute the primary purpose of the job:

- Design work requiring the technical knowledge, skill, and ability to conceive or originate designs;

- Illustrating work requiring artistic ability;

- Work involving the preparation of charts, diagrams, room arrangements, floor plans, etc.;

- Cartographic work involving the preparation of maps or plats and related materials and drawings of geological structures; and

- Supervisory work involving the management of a drafting program or the supervision of drafters when either constitutes the primary purpose of the job.

Positions are classified into levels on the basis of the following definitions.

#### **Drafter I**

Working under close supervision, traces or copies finished drawings, making clearly indicated revisions. Uses appropriate templates to draw curved lines. Assignments are designed to develop increasing skill in various drafting techniques. Work is spot checked during progress and reviewed upon completion.

*NOTE:* Exclude drafters performing elementary tasks while receiving training in the most basic drafting methods.

#### **Drafter II**

Prepares drawings of simple, easily visualized parts or equipment from sketches or marked-up prints. Selects appropriate templates and other equipment needed to complete assignments. Drawings fit familiar patterns and present few technical problems. Supervisor provides detailed instructions on new assignments, gives guidance when questions arise, and reviews completed work for accuracy.

#### **Drafter III**

Prepares various drawings of parts and assemblies, including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Work requires use of most of the conventional drafting techniques and a working knowledge of the terms and procedures of the industry. Familiar or recurring work is assigned in general terms; unfamiliar assignments include information on methods, procedures, sources of information, and precedents to be followed. Simple revisions to existing drawings may be assigned with a verbal explanation of the desired results; more complex revisions are produced from sketches which clearly depict the desired product.

#### **Drafter IV**

Prepares complete sets of complex drawings which include multiple views, detail drawings, and assembly drawings. Drawings include complex design features that require considerable drafting skill to visualize and portray. Assignments regularly require the use of mathematical

formulas to compute weights, load capacities, dimensions, quantities of materials, etc. Working from sketches and verbal information supplied by an engineer or designer, determines the most appropriate views, detail drawings, and supplementary information needed to complete assignments. Selects required information from precedents, manufacturer's catalogues, and technical guides. Independently resolves most of the problems encountered. Supervisor or designer may suggest methods of approach or provide advice on unusually difficult problems.

*NOTE:* Exclude drafters performing work of similar difficulty to that described at this level but who provide support for a variety of organizations which have widely differing functions or requirements.

### **Drafter V**

Works closely with design originators, preparing drawings of unusual, complex, or original designs which require a high degree of precision. Performs unusually difficult assignments requiring considerable initiative, resourcefulness, and drafting expertise. Assures that anticipated problems in manufacture, assembly, installation, and operation are resolved by the drawings produced. Exercises independent judgment in selecting and interpreting data based on a knowledge of the design intent. Although working primarily as a drafter, may occasionally perform engineering design work in interpreting general designs prepared by others or in completing missing design details. May provide advice and guidance to lower level drafters or serve as coordinator and planner for large and complex drafting projects.

## **COMPUTER OPERATOR**

Monitors and operates the control console of a digital computer, in accordance with operating instructions, to process data. Work is characterized by the following:

- Studies operating instructions to determine equipment setup needed;
- Loads equipment with required items (tapes, cards, paper, etc.);
- Switches necessary auxiliary equipment into system;
- Starts and operates computer;
- Responds to operating instructions and computer output instructions;
- Reviews error messages and makes corrections during operation *or* refers problems;
- Maintains operating record.

May test-run new or modified programs and *assist* in modifying systems or programs. Included within the scope of this definition are fully qualified computer operators, trainees working to become fully qualified operators, and lead operators providing *technical* assistance to lower level operators.

### **Computer Operator I**

Work assignments consist of on-the-job training (sometimes augmented by classroom training). Operator is provided detailed written or oral guidance before and during assignments and is under close personal supervision.

### **Computer Operator II**

Work assignments typically are established production runs (i.e., programs which present few operating problems) executed by serial processing (i.e., one program is processed at a time). In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure.

OR

Work assignments typically are established production runs (i.e., programs which present few operating problems) executed by multiprocessing (i.e., simultaneous processing of two or more programs). Operator serves as an assistant operator working under close supervision or performing a portion of a more senior computer operator's work. In response to computer output instructions or error conditions, may apply standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure.

### **Computer Operator III**

Work assignments are characterized by the frequent introduction of new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems) executed by serial processing. In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure.

OR

Work assignments typically are established production runs (i.e., programs which present few operating problems) executed by serial processing. Selects from a variety of standard setup and operating procedures. In response to computer output instructions or error conditions, deviates from standard procedures if standard procedures do not provide a solution. Then refers or aborts program.

OR

Work assignments are established production runs (i.e., programs which present few operating problems) executed by multiprocessing (i.e., simultaneous processing of two or more programs). In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedures.

### **Computer Operator IV**

Work assignments are characterized by the frequent introduction of new programs, applications, and procedures



(i.e., situations which require the operator to adapt to a variety of problems) executed by serial processing. Selects from a variety of standard setup and operating procedures. In response to computer output instructions or error conditions, deviates from standard procedures if standard procedures do not provide a solution. Then refers problems or aborts program.

OR

Work assignments are characterized by the frequent introduction of new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems) executed by multiprocessing. In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure.

OR

Work assignments are established production runs, (i.e., programs which present few operating problems) executed by multiprocessing. Selects from a variety of standard setup and operating procedures. In response to computer output instructions or error conditions, deviates from standard procedures if standard procedures do not provide a solution. Then refers problems or aborts program.

#### Computer Operator V

Work assignments are characterized by the frequent testing and introduction of new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems). In responding to computer output instructions and error conditions or to avoid loss of information or to conserve computer time, operator deviates from standard procedures or aborts program. Such actions may materially alter the computer unit's production plans. Advises programmers and subject-matter experts on setup techniques.

#### Computer Operator VI

In addition to level V characteristics, assignments at this level require a knowledge of program language, computer features, and software systems to assist in: (1) Maintaining, modifying, and developing operating systems or programs; (2) developing operating instructions and techniques to cover problem situations; (3) switching to emergency backup procedures.<sup>4</sup>

### PHOTOGRAPHER

Takes pictures requiring a knowledge of photographic techniques, equipment, and processes. Typically, some familiarity with the company's activities (e.g., scientific, engineering, industrial, technical, retail, commercial, etc.) and some artistic ability are needed at the higher levels. Depending on the objectives of the assignment,

photographers use standard equipment (including simple still, graphic, and motion picture cameras, video and television hand cameras, and similar commonly used equipment) and/or use special purpose equipment (including specialized still and graphic cameras, motion picture production, television studio, and high speed cameras and equipment). At the higher levels a complex accessory system of equipment *may* be used, as needed, with sound or lighting systems, generators, timing or measurement control mechanisms, or improvised stages or environments, etc. Work of photographers at all levels is reviewed for quality and acceptability. Photographers may also develop, process, and edit film or tape, may serve as a lead photographer to lower level workers, or may do work described at lower levels as needed.

Excluded are:

- (a) Workers who have no training or experience in photography techniques, equipment, and processes;
- (b) Workers who primarily operate reproduction, offset, or copying machines, motion picture projectors, or machines to match, cut, or splice negatives;
- (c) Workers who *primarily* develop, process, print, or edit photographic film or tape; or develop, maintain, or repair photographic equipment;
- (d) Workers who *primarily* direct the sequences, actions, photography, sound, and editing of motion pictures of television; writers and editors; and
- (e) Photographers taking pictures for *commercial* newspaper or magazine publishers, television stations, or movie producers.

Positions are matched to the appropriate definition level based on the difficulty of, and responsibility for the photography performed, including the subject-matter knowledge and artistry required to fulfill the assignment. While the equipment may be an indication of the level of difficulty, photographers at the higher levels may use standard equipment, as needed.

#### Photographer I

Takes routine pictures in situations where several shots can be taken. Uses standard still cameras for pictures where complications, such as speed, motion, color contrast, or lighting are not present or where there is no particular need to overcome them. Photographs are taken for identification, employee publications, information, or publicity purposes. Workers must be able to focus, center, and provide simple flash-type lighting for an uncomplicated photograph.

Typical subjects are employees who are photographed for identification or publicity of award ceremonies, interviews, banquets or meetings; or external views of machinery, supplies, equipment, buildings, damaged shipments, or other routine subjects photographed to

<sup>4</sup> Insufficient data were obtained for level VI to warrant presentation of average salaries.

record the condition at a specified time. Assignments are usually performed without direct guidance due to the clear and simple nature of the desired photograph.<sup>5</sup>

### **Photographer II**

Uses standard still cameras, commonly available lighting equipment, and related techniques to take photographs which involve limited problems of speed, motion, color contrast, or lighting. Typically, the subjects photographed are similar to those at Level I, but the technical aspects require more skill. Based on clear-cut objectives, determines shutter speeds, lens settings and filters, camera angles, exposure times, and type of film. Requires familiarity with the situation gained from similar past experience to arrange for specific emphasis, balanced lighting, and correction for distortion, etc., as needed. May use 16mm. or 35mm. motion picture cameras for simple shots such as moving equipment, individuals at work or meetings, and the like, where available or simple artificial lighting is used.

Ordinarily there is opportunity for repeated shots or for retakes if the original exposure is unsatisfactory. Consults with supervisor or more experienced photographers when problems are anticipated.

### **Photographer III**

Selects from a range of standard photographic equipment for assignments demanding exact renditions, normally without opportunity for later retakes, when there are specific problems or uncertainties concerning lighting, exposure time, color, artistry, etc. Discusses technical requirements with operating officials or supervisor and customizes treatment for each situation according to a detailed request. Varies camera processes and techniques and uses the setting and background to produce esthetic, as well as accurate and informative, pictures. Typically, standard equipment is used at this level although "specialized" photography work is usually performed; may use some special purpose equipment under closer supervision.

In typical assignments, photographs: Drawing, charts, maps, textiles, etc., requiring accurate computation of reduction ratios and exposure times and precise equipment adjustments; tissue specimens in fine detail and exact color when color and condition of the tissue may deteriorate rapidly; medical or surgical procedures or conditions which normally cannot be recaptured; machine or motor parts to show wear or corrosion in minute wires or gears; specialized real estate or retail goods for company catalogs or listings where saleability is enhanced by the photography; company products, works, construction sites, or patrons in prescribed detail to substantiate legal claims, contracts, etc.; artistic or technical design layouts requiring precise equipment settings; fixed objects on the ground or air-to-air objects which must be captured quickly and require directing the pilot to get the correct angle of approach.

Works independently; solves most problems through consultations with more experienced photographers, if available, or through reference sources.

### **Photographer IV**

Uses special purpose cameras and related equipment for assignments in which the photographer usually makes all the technical decisions, although the objective of the pictures is determined by operating officials. Conceives and plans the technical photographic effects desired by operating officials and discusses modifications and improvements to their original ideas in light of the potential and limits of the equipment. Improvises photographic methods and techniques or selects and alters secondary photographic features (e.g., scenes, backgrounds, colors, lighting) to carry out the desired primary objectives. Many assignments afford only one opportunity to photograph the subject. Typical examples of equipment used at this level include ultra-high speed, motion picture production, studio television, animation cameras, specialized still and graphic cameras, electronic timing and triggering devices, etc.

Some assignments are characterized by extremes in light values and the use of complicated equipment. Sets up precise photographic measurement and controls equipment; uses high speed color photography, synchronized stroboscopic (interval) light sources, and/or timed electronic triggering; operates equipment from a remote point; or arranges and uses cameras operating at several thousand frames per second. In other assignments, selects and sets up motion picture or television cameras and accessories and shoots a part of a production or a sequence of scenes, or takes special scenes to be used for background or special effects in the production.

Works under the guidelines and requirements of the subject-matter area to be photographed. Consults with supervisors only when dealing with highly unusual problems or altering existing equipment.

### **Photographer V**

As a top technical expert, exercises imagination and creative ability in response to photography situations requiring novel and unprecedented treatment. Typically performs *one or more* of the following assignments: (1) Develops and adapts photographic equipment or processes to meet new and unprecedented situations, e.g., works with engineers and physicists to develop and modify equipment for use in extreme conditions such as excessive heat or cold, radiation, high altitude, underwater, wind and pressure tunnels, or explosions; (2) plans and organizes the overall technical photographic coverage for a variety of events and developments in phases of a scientific, industrial, medical, or commercial research project or similar program; or (3) creates the desired illusion or emotional effect through developing trick or special effects photography for novel situations requiring

a high degree of ingenuity and imaginative camera work to heighten, simulate, or alter reality.

Independently develops, plans, and organizes the overall technical photographic aspects of the assignment in collaboration with operating officials who are responsible for the substance of the project. Uses imagination and creative ability to implement objectives within the capabilities and limitations of cameras and equipment. May exercise limited control over the substance of the event to be photographed by staging the

action, suggesting behavior of the principals, and rehearsing the activity before photographs are taken.<sup>5</sup>

*NOTE:* Excluded are photographers above Level V who independently plan the objectives, scope, and substance of the photography for the project in addition to planning the overall technical photographic coverage.

<sup>5</sup>Insufficient data were obtained for levels I and V to warrant presentation of average salaries.

## Clerical

### ACCOUNTING CLERK

Performs one or more accounting tasks, such as posting to registers and ledgers; balancing and reconciling accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying the clerical accuracy of various types of reports, lists, calculations, postings, etc.; preparing journal vouchers; or making entries or adjustment to accounts.

Levels I and II require a basic knowledge of routine clerical methods and office practices and procedures as they relate to the clerical processing and recording transactions and accounting information. Levels III and IV *require* a knowledge and understanding of the established and standardized bookkeeping and accounting procedures and techniques used in an accounting system, or a segment of an accounting system, where there are few variations in the types of transactions handled. In addition, some jobs at each level may require a basic knowledge and understanding of the terminology, codes, and processes used in an automated accounting system.

#### Accounting Clerk I

Performs very simple and routine accounting clerical operations, for example, recognizing and comparing easily identified numbers and codes on similar and repetitive accounting documents, verifying mathematical accuracy, and identifying discrepancies and bringing them to the supervisor's attention. Supervisor gives clear and detailed instructions for specific assignments. Employee refers to supervisor all matters not covered by instructions. Work is closely controlled and reviewed in detail for accuracy, adequacy, and adherence to instructions.

#### Accounting Clerk II

Performs one or more routine accounting clerical operations, such as: Examining, verifying, and correcting accounting transactions to ensure completeness and accuracy of data and proper identification of accounts,

and checking that expenditures will not exceed obligations in specified accounts; totaling, balancing, and reconciling collection vouchers; posting data to transaction sheets where employee identifies proper accounts and items to be posted; and coding documents in accordance with a chart (listing) of accounts. Employee follows specific and detailed accounting procedures. Completed work is reviewed for accuracy and compliance with procedures.

#### Accounting Clerk III

Uses a knowledge of double entry bookkeeping in performing one or more of the following: Posts actions to journals, identifying subsidiary accounts affected and debit and credit entries to be made and assigning proper codes; reviews computer printouts against manually maintained journals, detecting and correcting erroneous postings, and preparing documents to adjust accounting classifications and other data; or reviews lists of transactions rejected by an automated system, determining reasons for rejections, and preparing necessary correcting material. On routine assignments, employee selects and applies established procedures and techniques. Detailed instructions are provided for difficult or unusual assignments. Completed work and methods used are reviewed for technical accuracy.

#### Accounting Clerk IV

Maintains journals or subsidiary ledgers of an accounting system and balances and reconciles accounts. Typical duties include one or both of the following: Reviews invoices and statements (verifying information, ensuring sufficient funds have been obligated, and if questionable, resolving with the submitting unit, determining accounts involved, coding transactions, and processing material through data processing for application in the accounting system); and/or analyzes and reconciles computer printouts with operating unit reports (contacting units and researching causes of discrepancies, and taking action to ensure that accounts balance). Employee resolves problems in recurring assignments in accordance with previous training and experience.

Supervisor provides suggestions for handling unusual or nonrecurring transactions. Conformance with requirements and technical soundness of completed work are reviewed by the supervisor or are controlled by mechanisms built into the accounting system.

*NOTE:* Excluded from level IV are positions responsible for maintaining either a general ledger or a general ledger in combination with subsidiary accounts.

## **FILE CLERK**

Files, classifies, and retrieves material in an established filing system. May perform clerical and manual tasks required to maintain files. Positions are classified into levels on the basis of the following definitions.

### **File Clerk I**

Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; may fill out withdrawal charge. May perform simple clerical and manual tasks required to maintain and service files.

### **File Clerk II**

Sorts, codes, and files unclassified material by simple (subject-matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

### **File Clerk III**

Classifies and indexes file material such as correspondence, reports, technical documents, etc., in an established filing system containing a number of varied subject matter files. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

## **KEY ENTRY OPERATOR**

Operates keyboard-controlled data entry device such as keypunch machine or key-operated magnetic tape or disc encoder to transcribe data into a form suitable for computer processing. Work requires skill in operating an alphanumeric keyboard and an understanding of transcribing procedures and relevant data entry equipment.

Positions are classified into levels on the basis of the following definitions.

### **Key Entry Operator I**

Work is routine and repetitive. Under close supervision

or following specific procedures or detailed instructions, works from various standardized source documents which have been coded and require little or no selecting, coding, or interpreting of data to be entered. Refers to supervisor problems arising from erroneous items, codes, or missing information.

### **Key Entry Operator II**

Work requires the application of experience and judgment in selecting procedures to be followed and in searching for, interpreting, selecting, or coding items to be entered from a variety of source documents. On occasion may also perform some routine work as described for level I.

*NOTE:* Excluded are operators above level II using the key entry controls to access, read, and evaluate the substance of specific records to take substantive actions, or to make entries requiring a similar level of knowledge.

## **MESSENGER**

Performs various routine duties such as running errands, operating minor office machines such as sealers or mailers, opening mail, distributing mail on a regularly scheduled route or in a familiar area, and other minor clerical work. May deliver mail that requires some special handling, e.g., mail that is insured, registered, or marked for special delivery.

*Excluded* are positions which include any of the following as *significant* duties:

- (a) Operating motor vehicles;
- (b) Delivering valuables or security-classified mail when the work requires a continuing knowledge of special procedures for handling such items
- (c) Weighing mail, determining postage, or recording and controlling registered, insured, and certified mail in the mail room;
- (d) Making deliveries to unfamiliar or widely separated buildings or points which are not part of an established route; or
- (e) Directing other workers.

## **PERSONNEL CLERK/ASSISTANT (EMPLOYMENT)**

Personnel clerks/assistants (employment) provide clerical and technical support to personnel professionals or managers in matters relating to recruiting, hiring, transfer, change in pay status, and termination of company employees. At the lower levels, clerks/assistants primarily provide basic information to current and prospective employees, maintain personnel records and information listings, and prepare and process papers on personnel actions (hires, transfers, changes in pay, etc.).

At the higher levels, clerks/assistants (often titled personnel assistants or specialists) may perform limited aspects of a personnel professional's work, e.g., interviewing candidates, recommending placements, and preparing personnel reports. Final decisions on personnel actions are made by personnel professionals or managers. Some clerks/assistants may perform a limited amount of work in other specialties, such as benefits, compensation, or employee relations. Typing may be required at any level.

*Excluded are:*

- (a) Workers who primarily compute and process payrolls or compute and/or respond to questions on company benefits or retirement claims;
- (b) Workers who receive additional pay primarily for maintaining and safeguarding personnel record files for a company;
- (c) Workers whose duties do not require a knowledge of the company's personnel rules and procedures, such as receptionists, messengers, typists, or stenographers;
- (d) Workers in positions requiring a bachelor's degree; and
- (e) Workers who are primarily compensated for duties outside the employment specialty, such as benefits, compensation, or employee relations.

Positions are classified into levels on the basis of the following definitions. The work described is essentially at a responsible clerical level at the low levels and progresses to a staff assistant or technician level. At Level III, which is transitional, both types of work are described. Jobs which match either type of work described at Level III, or which are combinations of the two, can be matched.

#### **Personnel Clerk/Assistant (Employment) I**

Performs routine tasks which require a knowledge of company personnel procedures and rules, such as: Providing simple employment information and appropriate lists and forms to applicants or employees on types of jobs being filled, procedures to follow, and where to obtain additional information; ensuring that the proper company forms are completed for name changes, locator information, applications, etc. and reviewing completed forms for signatures and proper entries; or maintaining assigned segments of company personnel records, contacting appropriate sources to secure any missing items, and posting the items, such as, dates of promotion, transfer, and hire, or rates of pay or personal data. (If this information is computerized, skill in coding or entering information may be needed as a minor duty.) May answer outside inquiries for simple factual information, such as verification of dates of employment in response to telephone credit checks on employees. Some receptionist or other clerical duties may be performed. May be assigned work to provide training for a higher level position.

Detailed company rules and procedures are available for all aspects of the assignment. Guidance and assistance on unusual questions are available at all times. Work is spot checked, often on a daily basis.

#### **Personnel Clerk/Assistant (Employment) II**

Examines and/or processes personnel action documents using experience in applying company personnel procedures and policies. Ensures that all information is complete and consistent and determines whether further discussion with applicants or employees is needed or whether personnel information must be checked against additional files or listings. Must select the most appropriate precedent, rule, or procedure as a basis for the personnel action from a number of alternatives. Responds to varied questions from applicants, employees, or managers for readily available information which can be obtained from file material or manuals; response requires skill to secure cooperation in correcting improperly completed personnel action documents or to explain regulations and procedures. May provide information to managers on availability of applicants and status of hiring actions; may verify employment dates and places supplied on job applications; may maintain assigned personnel records; may administer typing and stenography tests.

Completes routine assignments independently. Detailed guidance is available for situations which deviate from established precedents. Clerks/assistants are relied upon to alert higher level clerks/assistants or supervisor to such situations. Work may be spot checked periodically.

#### **Personnel Clerk/Assistant (Employment) III**

##### **Type A**

Serves as a clerical expert in independently processing the most complicated types of personnel actions, e.g., temporary employment, rehires, and dismissals and in providing information when it is necessary to consolidate data from a number of sources, often with short deadlines. Screens applications for obvious rejections. Resolves conflicts in computer listings or other sources of employee information. Locates lost documents or reconstructs information using a number of sources. May check references of applicants when information in addition to dates and places of past work is needed, and judgment is required to ask appropriate routine follow-up questions. May provide guidance to lower level clerks. Supervisory review is similar to Level II.

#### **AND/OR**

##### **Type B**

Performs routine personnel assignments beyond the clerical level, such as: Orienting new employees to company programs, facilities, rules on time and attendance, and leave policies; computing basic statistical

information for reports on manpower profiles, EEO progress and accomplishments, hiring activities, attendance and leave profiles, turnover, etc.; and screening applicants for well defined positions, rejecting those who do not qualify for available openings for clear cut reasons, referring others to appropriate employment interviewer. Guidance is provided on possible sources of information, methods of work, and types of reports needed. Completed written work receives close technical review from higher level personnel office employees; other work may be checked occasionally.

#### **Personnel Clerk/Assistant (Employment) IV**

Performs work in support of personnel professionals which requires a good working knowledge of personnel procedures, guides, and precedents. In representative assignments: Interviews applicants, obtains references and recommends placement of applicants in a few well-defined occupations (trades or clerical) within a stable organization or unit; conducts post-placement or exit interviews to identify job adjustment problems or reasons for leaving the company; performs routine statistical analyses related to manpower, EEO, hiring, or other employment concerns, e.g., compares one set of data to another set as instructed; and requisitions applicants through employment agencies for clerical or similar level jobs. At this level assistants typically have a range of personal contacts within and outside the company with applicants, and must be tactful and articulate. May perform some clerical work in addition to the above duties. Supervisor reviews completed work against stated objectives.

#### **Personnel Clerk/Assistant (Employment) V**

Workers at this level perform duties similar to Level IV, but are responsible for more complicated cases and work with greater independence. Performs limited aspects of professional personnel work dealing with a variety of occupations common to the company which are clear-cut and stable in employment requirements. Typical duties include: Researching recruitment sources, such as employment agencies or state manpower offices, and advising managers on the availability of candidates in common occupations; screening and selecting employees for a few routine, nonpermanent jobs, such as summer employment; or answering inquiries on a controversial issue, such as a hiring or promotion freeze. These duties often require considerable skill and diplomacy in communications. Other typical duties may include: Surveying managers for future hiring requirements; developing newspaper vacancy announcements or explaining job requirements to employment agencies for administrative or professional positions; or reviewing the effect of corporate personnel procedural changes on local employment programs (e.g., automation of records, new affirmative action goals). May incidentally perform some clerical duties. Supervisory review is similar to Level IV.

## **PURCHASING ASSISTANT**

Provides clerical or technical support to buyers or contract specialists who deal with suppliers, vendors, contractors, etc., *outside* the company to purchase goods, materials, equipment, services, etc. Assistants at Level I examine requisitions and purchase documents, such as, purchase orders, invitations to bid, contracts, and supporting papers; they review, verify, prepare, or control the documents to assure accuracy, completeness, and correct processing. Assistants at Levels II and III may also expedite purchases already made, by contacting vendors and analyzing and reporting on supplier problems related to delivery, availability of goods, or any other part of the purchase agreement. Assistants at Level III may also develop technical information for buyers, e.g., comparative information on materials sought. All assignments require a practical knowledge of company purchasing procedures and operations *and* experience in applying company regulations, guidelines, or manuals to specific transactions. Assistants may type the purchasing documents they prepare or may perform work described at lower levels, as needed. Final decisions on purchasing transactions are made by buyers or contract specialists.

#### *Excluded are:*

- (a) Purchasing clerks or assistants, typists, file clerks, secretaries, receptionists, and trainees, who do not *examine* purchase requisitions or other documents to *assure* accuracy, completeness and correct processing; workers in these excluded positions may prepare and type the final purchase order, entering such prescribed items as quantities, model numbers, addresses, or prices, after a higher level employee screens the requisition and assures the purchase order data are complete and accurate.
- (b) Workers who process or expedite the purchase of items for direct sale either wholesale or retail;
- (c) Workers who as a primary duty: Maintain a filing system or listing to monitor inventory levels; reorder items by phone under ongoing contracts; or receive and disburse supplies and materials for use in the company;
- (d) Production expeditors or controllers who primarily ensure the timely arrival and coordination of purchased materials with assembly line or production schedules and requirements;
- (e) Purchasing expeditors who only check on the status of purchases already made and who do not analyze the facts at hand and do not make recommendations for either extension of delivery dates or for other similar modifications to the purchase agreement, as described at Level II, b;
- (f) Positions which require a technical knowledge of equipment characteristics and parts, production control, or manufacturing methods and procedures;
- (g) Positions requiring a bachelor's degree; and
- (h) Buyers.

Positions are classified into levels based on the following definitions according to the complexity of the work, the conditions of the purchase, and the amount of supervision.

### **Purchasing Assistant I**

According to detailed procedures or company regulations, examines documents such as requisitions, purchase orders, invitations to bid, contracts, and supporting papers. Reviews the purchase requisition to determine whether the correct item description, price, quantity, discount terms, shipping instructions, and/or delivery terms have been included and selects the appropriate purchase phrases and forms from prescribed company lists or files. Obtains any missing or corrected information, prepares the purchase order, and gives it to the buyer for approval when satisfied that the information is complete and the computations are accurate. Contacts are usually within the establishment to verify or correct factual information. May contact vendors for information about purchases already made and may reorder items under routine and existing purchase arrangements where few, if any, questions arise. Receives detailed instructions on new assignments. Refers questions to supervisor who may spot check work on a daily basis.

Assistants at this level examine documents for order of standard goods, supplies, equipment or services, and/or for order of specialized items when the complexity of the item does not affect the assistant's work, i.e., the assistant is *not* required to use considerable judgment to find a previous transaction to use as a guideline, as described at Level II, a.

### **Purchasing Assistant II**

Assistants at this level perform assignments described in paragraphs a or b, or a combination of the two.

- a. Reviews and prepares purchase documents for specialized items, such as items with optional features or technical equipment requiring precise specifications. Since the transactions usually require special purchasing conditions, e.g., multiple deliveries, provision of spare parts, or renegotiation of terms, considerable judgment is needed to find a previous transaction to use as a guideline; as required, adapts the phrases or clauses in the guideline transaction that apply to the purchase at hand. In some cases, reviews purchasing documents prepared by lower level clerks or prepared by personnel in other company units to detect processing discrepancies or to clarify the purchase papers; corrects clerical errors. May advise company employees on how to prepare requisitions for items to be ordered.
- b. Expedites purchases by *making a recommendation for action* based on simple analysis of the facts at hand, company guidelines, and the background of the purchase: Contacts suppliers to obtain information on deliveries or on contracts; based on clear-cut guidelines for each type of purchase and previous performance of supplier, availability of item, or impact of delay,

recommends extension of delivery date or other similar modifications. In some cases, decides to refer problems to production, packaging, or other company specialists. May reorder standard items under a variety of existing purchase agreements where judgment is needed to ask further questions and follow-up and coordinate transactions.

Assistants at this level expedite purchases of standard goods, supplies, equipment, or services, and/or purchases of specialized items when the complexity of the item does *not* affect the assistant's work, i.e., the assistant does not coordinate requests for minor deviations from contract specifications, etc., as described at Level III, b.

Assistants at this level coordinate information with company buyers and with suppliers outside the company and keep others informed of the progress of transactions. Major changes in company regulations and procedures are explained by supervisor. Refers unusual situations to supervisor who also spot checks all completed work for adequacy.

### **Purchasing Assistant III**

Assistants at this level have a good understanding of purchase circumstances for specialized items—what to buy, where to buy, and under what terms buyers negotiate and make purchases. They perform assignments described in paragraphs a, b, or c, or a combination of any of these.

- a. Reviews and prepares purchase documents for highly specialized items where few precedent transactions exist that can be used as guidelines and where provisions such as fixed-price contracts with provisions for escalation, price redetermination, or cost incentives are needed. Complicated provisions for progress payments, for testing and evaluating the ordered item, or for meeting company production schedules may also exist. As necessary, drafts special clauses, terms, or requirements for unusual purchases. Provides authoritative information to others on company purchase procedures and assures that documents and transactions agree with basic procurement policies.
- b. Expedites purchases of specialized items (see Level II, b.) when the complexity of the items *does* affect the assistant's work. Investigates supplier problems and coordinates requests for minor deviations from the contract specifications with specialists, buyers, suppliers, and users. Recommends revisions to the contract or purchase agreement, if needed, based upon company requirements. May reorder technical and specialized items within existing purchase contracts which contain special purchasing conditions. Questions which arise are handled similarly to those in Level II, b.
- c. Furnishes technical support to buyers or contract specialists, using a detailed knowledge of company purchasing transactions and procedures, e.g., analyzes bids for contracts to determine the possible number and interest of bidders for *standard* commodities and services; assembles contracts and drafts special clauses, terms, or requirements for unprecedented purchases, e.g., for specially designed equipment or for complex one-time transactions; gathers and summarizes informa-

tion on the availability of special equipment and the ability of suppliers to meet company needs.

Purchasing assistants at this level receive instructions about new procurement policies. Assistants seek guidance on highly unusual problems but are expected to propose solutions for supervisory approval. Supervisory review is similar to Level II; drafts of special clauses, etc., are reviewed in detail.

*NOTE: Excluded are higher level workers who: Negotiate agreements with contractors on minor changes in the terms of an established contract; or analyze and make recommendations about proposals of specialized equipment, about the solvency and performance of firms, or about clerical processing methods needed to fit new purchasing policies.*

## SECRETARY

Provides principal secretarial support in an office, usually one individual, and, in some cases, also to the subordinate staff of that individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor and staff. Works fairly independently receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring a knowledge of office routine and an understanding of the organization, programs, and procedures related to the work of the office.

*Exclusions.* Not all positions titled "secretary" possess the above characteristics. Examples of positions which are excluded from the definition are as follows:

- a. Clerks or secretaries working under the direction of secretaries or administrative assistants as described in e;
- b. Stenographers not fully performing secretarial duties;
- c. Stenographers or secretaries assigned to two or more professional, technical, or managerial persons of equivalent rank;
- d. Assistants or secretaries performing any kind of technical work, e.g., personnel, accounting, or legal work;
- e. Administrative assistants or supervisors performing duties which are more difficult or more responsible than the secretarial work described in LR-1, through LR-4;
- f. Secretaries receiving additional pay primarily for maintaining confidentiality of payroll records or other sensitive information;
- g. Secretaries performing routine receptionist, typing, and filing duties following detailed instructions and guidelines; these duties are less responsible than those described in LR-1 below;
- h. Trainees.

## Classification by Level

Secretary jobs which meet the required characteristics are matched at one of five levels according to two factors: (a) Level of the secretary's supervisor within the overall organizational structure, and (b) Level of the secretary's responsibility. The table following the explanations of these factors indicates the level of the secretary for each combination of factors.

## LEVEL OF SECRETARY'S SUPERVISOR (LS)

Secretaries should be matched at one of the three LS levels below best describing the organization of the secretary's supervisor.

LS-1 Organizational structure is not complex and internal procedures and administrative controls are simple and informal; supervisor directs staff through face-to-face meetings.

LS-2 Organizational structure is complex and is divided into subordinate groups that usually differ from each other as to subject-matter, function, etc.; supervisor usually directs staff through intermediate supervisors; internal procedures and administrative controls are formal. An entire organization (e.g., division, subsidiary, or parent organization) may contain a variety of subordinate groups which meet the LS-2 definition. Therefore, it is not unusual for one LS-2 supervisor to report to another LS-2 supervisor.

The presence of subordinate supervisors does not by itself mean LS-2 applies, e.g., a clerical processing organization divided into several units, each performing very similar work is placed in LS-1.

In smaller organizations or industries such as retail trade, with relatively few organizational levels, the supervisor may have an impact on the policies and major programs of the entire organization, and may deal with important outside contacts, as described in LS-3.

LS-3 Organizational structure is divided into two or more subordinate supervisory levels (of which at least one is a managerial level) with several subdivisions at each level. Executive's program(s) are usually interlocked on a direct and continuing basis with other major organizational segments, requiring constant attention to extensive formal coordination, clearances, and procedural controls. Executive typically has: Financial decision-making authority for assigned program(s); considerable impact on the entire organization's financial position or image; and responsibility for, or has staff specialists in, such areas as personnel and administration for assigned organization. Execu-



tive plays an important role in determining the policies and major programs of the entire organization, and spends considerable time dealing with outside parties actively interested in assigned program(s) and current or controversial issues.

### **LEVEL OF SECRETARY'S RESPONSIBILITY (LR)**

This factor evaluates the nature of the work relationship between the secretary and the supervisor or staff, and the extent to which the secretary is expected to exercise initiative and judgment. Secretaries should be matched at the level best describing their level of responsibility. When a position's duties span more than one LR level, the introductory paragraph at the beginning of each LR level should be used to determine which of the levels best matches the position. (Typically, secretaries performing at the higher levels of responsibility also perform duties described at the lower levels.)

**LR-1** Carries out *recurring* office procedures independently. Selects the guideline or reference which fits the specific case. Supervisor provides specific instructions on new assignments and checks completed work for accuracy. Performs varied duties including or comparable to the following:

- a. Responds to routine telephone requests which have standard answers; refers calls and visitors to appropriate staff. Controls mail and assures timely staff response; may send form letters.
- b. As instructed, maintains supervisor's calendar, makes appointments, and arranges for meeting rooms.
- c. Reviews materials prepared for supervisor's approval for typographical accuracy and proper format.
- d. Maintains recurring internal reports, such as: Time and leave records, office equipment listings, correspondence controls, training plans, etc.
- e. Requisitions supplies, printing, maintenance, or other services. Types, takes and transcribes dictation, and establishes and maintains office files.

**LR-2** Handles differing situations, problems, and deviations in the work of the office according to the supervisor's general instructions, priorities, duties, policies, and program goals. Supervisor may assist secretary with special assignments. Duties include or are comparable to the following:

- a. Screens telephone calls, visitors, and incoming correspondence; personally responds to requests for information concerning office procedures; determines which requests should be handled by the supervisor, appropriate staff members, or other offices. May prepare and sign routine, non-technical correspondence in own or supervisor's name.
- b. Schedules tentative appointments without prior clearance. Makes arrangements for conferences and meetings and assembles established background materials, as directed. May attend meetings and record

and report on the proceedings.

- c. Reviews outgoing materials and correspondence for internal consistency and conformance with supervisor's procedures; assures that proper clearances have been obtained, when needed.
- d. Collects information from the files or staff for routine inquiries on office program(s) or periodic reports. Refers non-routine requests to supervisor or staff.
- e. Explains to subordinate staff supervisor's requirements concerning office procedures. Coordinates personnel and administrative forms for the office and forwards for processing.

**LR-3** Uses greater judgment and initiative to determine the approach or action to take in non-routine situations. Interprets and adapts guidelines, including unwritten policies, precedents, and practices, which are not always completely applicable to changing situations. Duties include or are comparable to the following:

- a. Based on a knowledge of the supervisor's views, composes correspondence on own initiative about administrative matters and general office policies for supervisor's approval.
- b. Anticipates and prepares materials needed by the supervisor for conferences, correspondence, appointments, meetings, telephone calls, etc., and informs supervisor on matters to be considered.
- c. Reads publications, regulations, and directives and takes action or refers those that are important to the supervisor and staff.
- d. Prepares special or one-time reports, summaries, or replies to inquiries, selecting relevant information from a variety of sources such as reports, documents, correspondence, other offices, etc., under general direction.
- e. Advises secretaries in subordinate offices on new procedures; requests information needed from the subordinate office(s) for periodic or special conferences, reports, inquiries, etc. Shifts clerical staff to accommodate workload needs.

**LR-4** Handles a wide variety of situations and conflicts involving the clerical or administrative functions of the office which often cannot be brought to the attention of the executive. The executive sets the overall objectives of the work. Secretary may participate in developing the work deadlines. Duties include or are comparable to the following:

- a. Composes correspondence requiring some understanding of technical matters; may sign for executive when technical or policy content has been authorized.
- b. Notes commitments made by executive during meetings and arranges for staff implementation. On own initiative, arranges for staff member to represent organization at conferences and meetings, establishes appointment priorities, or reschedules or refuses appointments or invitations.
- c. Reads outgoing correspondence for executive's approval and alerts writers to any conflict with the file or departure from policies or executive's viewpoints; gives advice to resolve the problems.

- d. Summarizes the content of incoming materials, specially gathered information, or meetings to assist executive; coordinates the new information with background office sources; draws attention to important parts or conflicts.
- e. In the executive's absence, ensures that requests for action or information are relayed to the appropriate staff member; as needed, interprets request and helps implement action; makes sure that information is furnished in timely manner; decides whether executive should be notified of important or emergency matters.

Excludes secretaries performing any of the following duties:

Acts as office manager for the executive's organization, e.g., determines when new procedures are needed for changing situations and devises and implements alternatives; revises or clarifies procedures to eliminate conflict or duplication; identifies and resolves various problems that affect the orderly flow of work in transactions with parties outside the organization.

Prepares agenda for conferences; explains discussion topics to participants; drafts introductions and develops background information and prepares outlines for executive or staff member(s) to use in writing speeches;

Advises individuals outside the organization on the executive's views on major policies or current issues facing the organization; contacts or responds to contacts from high-ranking outside officials (e.g., city or State officials, Members of Congress, presidents of national unions or large national or international firms, etc.) in unique situations. These officials may be relatively inaccessible, and each contact typically must be handled differently, using judgment and discretion.

**Table C-4 Criteria for matching secretaries by level**

Level of Secretary's Supervisor	Level of Secretary's Responsibility			
	LR-1	LR-2	LR-3	LR-4
LS-1	I*	II	III	IV
LS-2	I*	III	IV	V
LS-3	I*	IV	V	V

\*Regardless of LS Level.

## STENOGRAPHER

Primary duty is to take dictation using shorthand, and to transcribe the dictation. May also type from written copy. May operate from a stenographic pool. May occasionally transcribe from voice recordings.

Excluded from this definition are:

- (a) Trainee positions not requiring a fully qualified stenographer.
- (b) Secretaries providing the principal secretarial support

in an office and performing more responsible and discretionary tasks, as described in LR-1 thru LR-4 in the Secretary definition.

- (c) Stenographers who take dictation involving the frequent use of a wide variety of technical or specialized vocabulary. Typically this kind of vocabulary *cannot* be learned in a relatively short period of time, e.g., a month or two.
- (d) Stenographers, such as shorthand reporters, who record material verbatim at hearings, conferences, or similar proceedings.

## Stenographer I

Takes and transcribes dictation, receiving specific assignments along with detailed instructions on such requirements as form and presentation. The transcribed material is typically reviewed in rough draft and the final transcription is reviewed for conformance with the rough draft. May maintain files, keep simple records, or perform other relatively routine clerical tasks.

## Stenographer II

Takes and transcribes dictation determining the most appropriate format. Performs stenographic duties requiring significantly greater independence and responsibility than Stenographer I. Supervisor typically provides general instructions. Work requires a thorough working knowledge of general business and office procedures and of the specific business operations, organizations, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as maintaining follow-up files; assembling material for reports, memoranda, and letters; composing simple letters from general instructions; reading and routing incoming mail; answering routine questions; etc.

## TYPIST

Uses a manual, electric, or automatic typewriter to type various materials. Included are automatic typewriters that are used only to record text and update and reproduce previously typed items from magnetic cards or tape. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

Excluded from this definition is work that involves;

- (a) Typing directly from spoken material that has been recorded on discs, cylinders, belts, tapes, or other similar media;
- (b) The use of varitype machines, composing equipment, or automatic equipment in preparing material for printing; and
- (c) Familiarity with specialized terminology in various keyboard commands to manipulate or edit the

recorded text to accomplish revisions, or to perform tasks such as extracting and listing items from the text, or transmitting text to other terminals, or using sort commands to have the machine reorder material. Typically requires the use of automatic equipment which may be either computer linked or have a programmable memory so that material can be organized in regularly used formats or preformed paragraphs which can then be coded and stored for future use in letters or documents.

### **Typist I**

Performs *one or more of the following*: Copy typing from rough or clear drafts; or routine typing of forms, insurance policies, etc; or setting up simple standard tabulations; or copying more complex tables already set up and spaced properly.

### **Typist II**

Performs *one or more of the following*: Typing material in final form when it involves combining material from several sources; or responsibility for correct spelling;

syllabication, punctuation, etc., of technical or unusual words or foreign language materials; or planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters, varying details to suit circumstances.

**NOTE:** The occupational titles<sup>1</sup> and definitions for accounting clerks, drafters, file clerks, key entry operators, stenographers, and typists are the same as those used in the Bureau's program of occupational wage surveys in metropolitan areas.

Revised definitions for stenographer and typist were introduced into the area surveys in calendar year 1981; the 4-level accounting clerk in 1980; and the 5-level drafter in 1979. Three years are required to bring a new job definition into all areas covered by the program.

Before 1981, level designations differed between the area and national surveys. See *National Survey of Professional, Administrative, Technical and Clerical Pay, March 1980*. Bulletin 2081 (Bureau of Labor Statistics, 1980), page 68, for details.

## **Appendix D. Comparison of Salaries in Private Industry with Salaries of Federal Employees under the General Schedule**

The survey was designed to provide a basis for comparing salaries under the General Schedule classification and pay system with salaries in private enterprise. To assure collection of pay data for work levels equivalent to the General Schedule grade levels, the Office of Personnel Management (OPM), in cooperation with the Bureau of

Labor Statistics, prepared the occupational work level definitions used in the survey. Definitions were graded by OPM according to standards established for each grade level. Table D-1 shows the surveyed jobs grouped by work levels equivalent to General Schedule grade levels.

**Table D.1 Comparison of average annual salaries in private industry with salary rates for Federal employees under the General Schedule**

Occupation and level surveyed by BLS <sup>1</sup>	Average annual salary in private industry <sup>2</sup> March 1981	Salary rates for Federal employees under the General Schedule, March 1981 <sup>3</sup>											
		Grade <sup>4</sup>	Average <sup>5</sup> March 1981	Step <sup>6</sup>									
				1	2	3	4	5	6	7	8	9	10
File clerks I	\$ 8,423	GS 1	\$8,066	\$7,960	\$8,225	\$8,490	\$8,755	\$9,020	\$9,175	\$9,437	\$9,699	\$9,712	\$9,954
Messengers	9,395												
Accounting clerks I	9,575	GS 2	9,145	8,951	9,163	9,459	9,712	9,820	10,109	10,398	10,687	10,976	11,265
Drafters I	11,082												
File clerks II	9,836												
Key entry operators I	10,633												
Typists I	9,959												
Accounting clerks II	11,431	GS 3	10,441	9,766	10,092	10,418	10,744	11,070	11,396	11,722	12,048	12,374	12,700
Drafters II	12,900												
Engineering technicians I	13,644												
File clerks III	11,691												
Key entry operators II	12,953												
Personnel clerks/assistants I	10,777												
Stenographers I	13,191												
Typists II	12,358												
Accounting clerks III	13,454	GS 4	12,154	10,963	11,328	11,693	12,058	12,423	12,788	13,153	13,518	13,883	14,248
Computer operators I	10,969												
Drafters III	15,612												
Engineering technicians II	15,679												
Personnel clerks/assistants II	12,696												
Purchasing assistants I	12,025												
Secretaries I	12,947												
Stenographers II	15,727												
Accounting clerks IV	16,886	GS 5	13,883	12,266	12,675	13,084	13,493	13,902	14,311	14,720	15,129	15,538	15,947
Accountants I	16,529												
Auditors I	16,396												
Buyers I	16,202												
Chemists II	18,082												
Computer operators I	12,586												
Drafters IV	19,336												
Engineers I	21,712												
Engineering technicians III	18,326												
Job analysts I	16,940												
Personnel clerks/assistants III	14,303												
Photographers II	17,096												
Purchasing assistants II	15,287												
Secretaries II	13,769												
Computer operators III	14,645	GS 6	15,702	13,672	14,128	14,584	15,040	15,496	15,952	16,408	16,864	17,320	17,776
Personnel clerks/assistants IV	16,794												
Purchasing assistants III	19,688												
Secretaries III	15,576												

See footnotes at end of table.

**Table D-1. Continued—Comparison of average annual salaries in private industry with salary rates for Federal employees under the General Schedule**

Occupation and level surveyed by BLS <sup>1</sup>	Average annual salary in private industry <sup>2</sup> March 1981	Salary rates for Federal employees under the General Schedule, March 1981 <sup>3</sup>										
		Grade <sup>4</sup>	Average <sup>5</sup> March 1981	Step <sup>6</sup>								10
				1	2	3	4	5	6	7	8	
Accountants II .....	\$20,153	GS 7	\$17,182	\$15,699	\$16,205	\$16,711	\$17,217	\$17,723	\$18,229	\$18,735	\$19,241	\$19,747
Auditors II .....	19,814											
Buyers II .....	20,266											
Chemists II .....	21,089											
Computer operators IV .....	17,704											
Drafters V .....	24,129											
Engineers II .....	23,663											
Engineering technicians IV .....	21,630											
Job analysts II .....	18,296											
Personnel clerks/assistants V .....	20,079											
Photographers III .....	20,444											
Public accountants I .....	16,130											
Secretaries IV .....	16,872											
Computer operators V .....	20,796	GS 8	19,524	17,387	17,948	18,509	19,070	19,631	20,192	20,753	21,314	21,875
Secretaries V .....	19,615											
Accountants III .....	23,545	GS 9	20,804	19,205	19,825	20,445	21,065	21,685	22,305	22,925	23,545	24,165
Attorneys I .....	22,477											
Auditors III .....	24,401											
Buyers III .....	25,196											
Chemists III .....	25,438											
Engineers III .....	26,746											
Engineering technicians V .....	24,609											
Job analysts III .....	22,799											
Photographers IV .....	23,187											
Public accountants II .....	18,000											
Accountants IV .....	28,819	GS 11	25,369	23,236	23,986	24,736	25,486	26,236	26,986	27,736	28,486	29,236
Attorneys II .....	28,059											
Auditors IV .....	29,475											
Buyers IV .....	30,583											
Chemists IV .....	30,801											
Chief accountants I .....	31,576											
Directors of personnel I .....	27,848											
Engineers IV .....	31,352											
Job analysts IV .....	28,718											
Public accountants III .....	21,426											
Accountants V .....	35,141	GS 12	30,485	27,849	28,747	29,645	30,543	31,441	33,239	33,237	34,135	35,033
Attorneys III .....	36,373											
Chemists V .....	36,663											
Chief accountants II .....	35,560											
Directors of personnel II .....	35,193											
Engineers V .....	36,725											
Public accountants IV .....	25,748											

See footnotes at end of table.

**Table D-1. Continued—Comparison of average annual salaries in private industry with salary rates for Federal employees under the General Schedule**

Occupation and level surveyed by BLS <sup>1</sup>	Salary rates for Federal employees under the General Schedule, March 1981 <sup>2</sup>												
	Average annual salary in private industry <sup>3</sup> March 1981	Grade <sup>4</sup>	Average <sup>5</sup> March 1981	Step <sup>6</sup>									
				1	2	3	4	5	6	7	8	9	10
Accountants VI .....	\$43,754	GS 13	\$36,582	\$32,048	\$33,116	\$34,184	\$35,252	\$36,320	\$37,388	\$38,456	\$39,524	\$40,592	\$41,660
Attorneys IV .....	44,853												
Chemists VI .....	41,911												
Chief accountants III .....	44,494												
Directors of personnel III .....	42,890												
Engineers VI .....	42,622												
Attorneys V .....	54,792	GS 14	43,183	37,871	39,133	40,395	41,657	42,919	44,181	45,443	46,705	47,967	49,229
Chemists VII .....	48,845												
Chief accountants IV .....	56,016												
Directors of personnel IV .....	53,914												
Engineers VII .....	49,287												
Attorneys VI .....	66,958	GS 15 <sup>7</sup>	49,015	44,547	46,032	47,517	49,002	50,487	51,972	53,457	54,942	56,427	57,912
Engineers VIII .....	56,828												

<sup>1</sup>For definitions, see appendix C.

<sup>2</sup>Survey findings, as summarized in table 1 of this bulletin. For scope of survey, see appendix A.

<sup>3</sup>General Schedule rates in effect in March 1981, the reference date of the PATC survey.

<sup>4</sup>Corresponding grades in the General Schedule were supplied by the Office of Personnel Management.

<sup>5</sup>Mean salary of all General Schedule employees in each grade as of Mar. 31, 1981. Not limited to Federal employees in occupations surveyed by BLS.

<sup>6</sup>Section 5335 of title 5 of the U.S. Code provides for within-grade increases on condition that the

employee's work is of an acceptable level of competence as defined by the head of the agency. For employees who meet this condition, the service requirements are 52 calendar weeks each for advancement to salary rates 2, 3, and 4; 104 weeks each for advancement to salary rates 5, 6, and 7; and 156 weeks each for advancement to salary rates 8, 9, 10. Section 5336 provides that an additional within-grade increase may be granted within any period of 52 weeks in recognition of high quality performance above that ordinarily found in the type of position concerned.

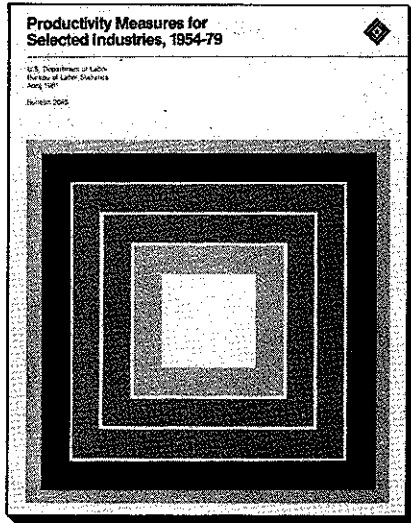
<sup>7</sup>The rate of pay for employees at some steps is limited by section 5308 of title 5 of the U.S. Code to the rate for level V of the Executive Schedule, \$50,112.50.

Under Section 5303 of title 5 of the U.S. Code, higher minimum rates (but not exceeding the maximum salary rate prescribed in the General Schedule for the grade or level) and a corresponding new salary range may be established for positions or occupations under certain conditions. The conditions include a finding that the Government's recruitment or retention of well qualified persons is significantly handicapped because the salary rates in private industry are substantially above the salary rates of the statutory pay schedules. As of March 1981, special, higher salary ranges were authorized for professional engineers at the entry grades (GS-5 and GS-7), and at GS-9 and GS-11. In addition, special rates were authorized for mining engineers at GS-12 and 13 and for petroleum engineers at GS-12, 13 and 14. Information on special salary rates, including the occupations and the areas to which they apply, may be obtained from the Office of Personnel Management, Washington, D. C. 20415, or its regional offices.

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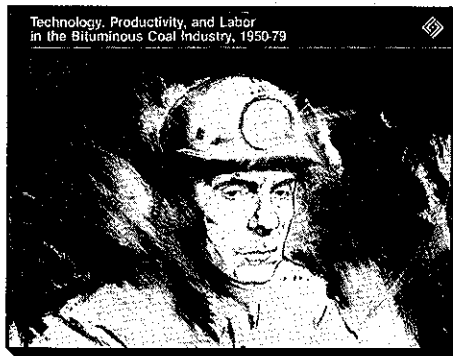
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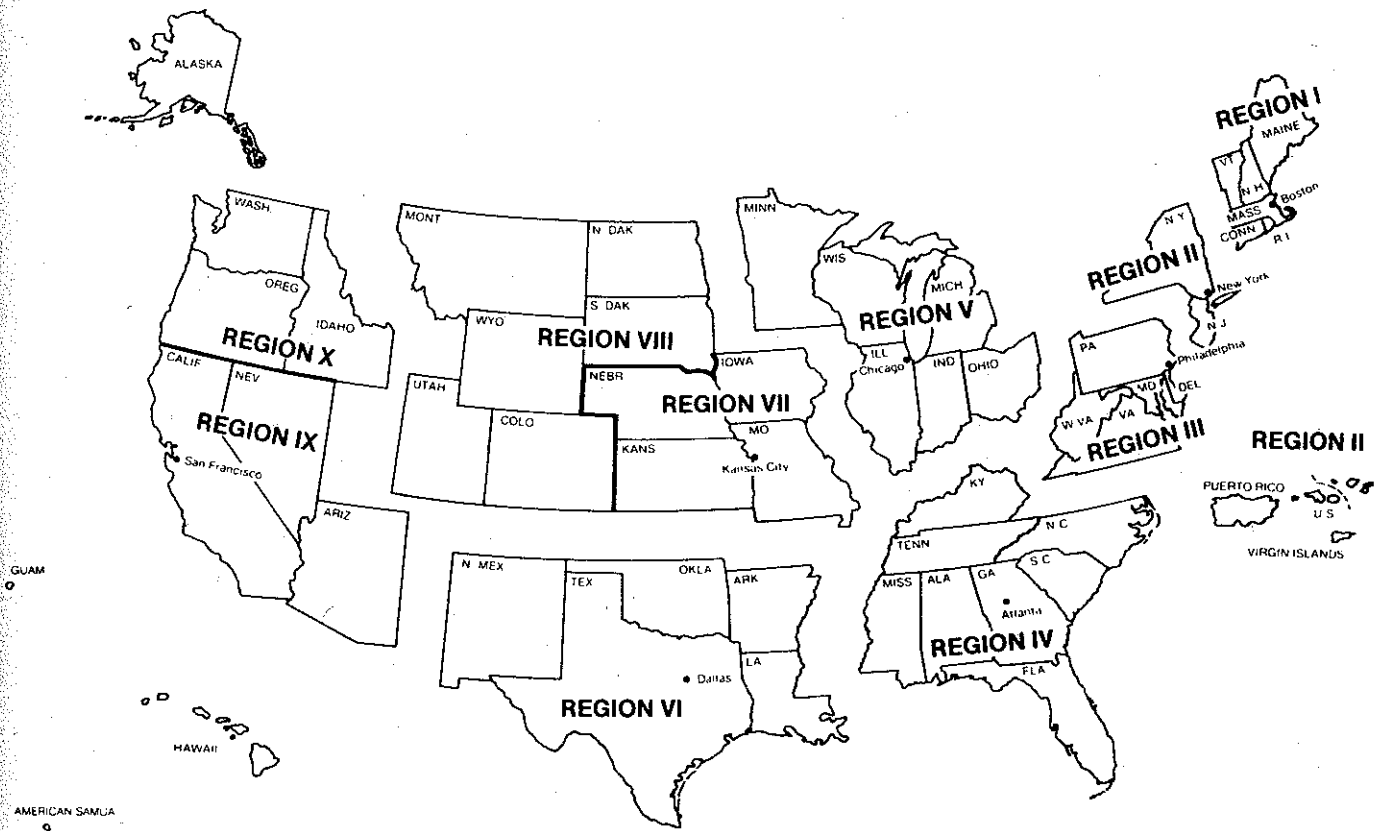
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