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# National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1980



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Bulletin 2081



# National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1980



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U.S. Department of Labor  
Ray Marshall, Secretary  
Bureau of Labor Statistics  
Janet L. Norwood, Commissioner  
October 1980

Bulletin 2081



# 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 1980, 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 and drafting occupations are available for each of the metropolitan areas in which the Bureau conducts area wage surveys. These area reports also include information on supplementary benefits such as paid vacations, holidays, and health, insurance, and pension plans relating to nonsupervisory office workers.

In 1979 a test survey of benefits in private industry covered the same scope as the national survey of professional, administrative, technical, and clerical pay. The findings of the test survey appear in *Employee Benefits in Industry: A Pilot Study*, Report 615 (Bureau of Labor Statistics, July 1980). Copies are available at the Bureau's regional offices listed on the inside back cover of this bulletin.

The results of the annual 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 (formerly the U.S. Civil Service Commission) to serve jointly as his agent for the purpose of setting pay for Federal white-collar employees. The agent is responsible for translating the survey findings into recommendations to the President as to the appropriate adjustments needed in Federal pay rates to make them comparable with private enterprise pay rates for the same levels of work. The President's 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 were 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 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 presented in this bulletin. The Bureau, on its own behalf and on behalf of the other Federal agencies that collaborated in planning the survey, wishes to express appreciation for the cooperation it has received.

This study was conducted in the Bureau's Office of Wages and Industrial Relations by the Division of Occupational Wage Structures. Philip M. Doyle and Felice Porter prepared the analysis in the bulletin. Field work for the survey was directed by the Bureau's Assistant Regional Commissioners for Operations. Unless specifically identified as copyright, 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 1980

## Summary

From March 1979 to March 1980, average salaries of workers in occupations covered by this survey rose 9.1 percent, the largest annual increase since the survey was begun in 1960. Increases for the 13 professional, administrative, and technical support occupations surveyed, which ranged from 4.2 percent for public accountants to 11.8 percent for drafters, averaged 9.3 percent. Increases for clerical occupations, which ranged from 5.5 percent for messengers to 10.1 percent for stenographers, averaged 8.8 percent.<sup>1</sup>

Average monthly salaries for the 91 occupational levels varied from \$657 for clerks engaged in routine filing to \$5,053 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 division represented in the survey.

## Characteristics of the survey

This survey, the 21st in an annual series, provides nationwide salary averages and distributions for 91 work level categories covering 21 occupations. It relates to establishments in all areas of the United States, except Alaska and Hawaii, engaged 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 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.

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 purposely defined, however, to cover

specific bands of levels which are not intended to represent all workers in those occupations.

The survey is designed to permit 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 over five-sixths of all the workers and nine-tenths of the professional, administrative, technical, and clerical 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 1,717,000 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 434,100 employees, whereas two other occupational categories (chief accountants and job analysts) each included fewer than 2,300 employees. Accounting clerks and secretaries made up just over three-fifths of the 789,500 employees in the clerical occupations studied. Selected drafting occupations had aggregate employment of 84,300; five engineering technician levels together had 103,900; and the six computer operator levels, 63,700.

About one-half of the workers in the selected occupations were women.<sup>3</sup> The proportion of women varied significantly, however, among the 21 survey occupations. For example, women accounted for more than 98

<sup>1</sup> Results of the March 1979 survey were presented in *National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1979*, Bulletin 2045 (Bureau of Labor Statistics, 1979).

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

<sup>3</sup> Whenever possible, data were collected for men and women separately. Bureau field representatives were unable to obtain data by sex for about 6 percent of the workers.

percent of the clerical employees but for less than 3 percent of the chief accountants and engineers. Text table 1 shows the 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 9 occupational work levels 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. Also shown are average percent changes for the two broad occupational groups covered by the survey (the professional, administrative, and technical support group; and the clerical group) and the average percent change for the two groups combined.

The 9.1 percent increase in white-collar salaries in the year ended March 1980 was the largest since the series was begun; it was slightly above the 9.0 increase in the 1974-75 period. Clerical salaries were up 8.8 percent for the year ended March 1980; salaries of the professional, administrative, and technical support occupations rose 9.3 percent.

Among the 21 occupations for which comparable data were available from the previous survey, the smallest increases were for public accountants at 4.2 percent, and messengers at 5.5 percent. Receiving the largest increases were drafters at 11.8 percent; chief accountants at 11.3 percent; and directors of personnel at 11.2 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 5-10; and group C, grades 11-15. (See appendix D, table D-1, for a listing of survey classifications that equate to each GS grade.) In general, average salaries increased more for the higher occupational levels (group C) than for the two lower groups during the 1970-80 period.

Another method of examining salary trends is to combine the data into the four occupational groups shown in chart 1. Increases from 1979 to 1980 amounted to 9.3 percent for the experienced professional and administrative group; 10.3 percent for the entry and developmental professional and administrative group; 10.5 percent for the technical support group; and 9.6 percent for the clerical group.<sup>4</sup>

Annual increases in salaries for the entry and developmental professional and administrative group averaged 6.1 percent over the decade—less than the increases for the technical support, clerical, and the experienced professional and administrative groups, 7.2, 7.3, and 7.3 percent, respectively.<sup>5</sup>

### Average salaries, March 1980

Average monthly salaries for occupations studied (table 1) ranged from \$657 for file clerks I to \$5,053 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 various occupational levels and a brief indication of duties and responsibilities these levels represent are summarized in the following paragraphs.<sup>6</sup>

Among the six levels of *accountants* surveyed, average monthly salaries ranged from \$1,262 for accountants I to \$3,358 for accountants VI. Level VI, which was surveyed for the first time in 1980, includes specialists in complex accounting systems. *Auditors* in the four levels defined for the survey had average salaries ranging from \$1,238 a month for auditors I to \$2,232 for auditors IV. Level I in both the accounting and auditing series included trainees who had bachelor's degrees in accounting or the equivalent in education and experience combined. For level III, the most heavily populated group in both series, monthly salaries averaged \$1,775 for accountants and \$1,836 for auditors. Sixty-six percent of the accountants and 39 percent of the auditors were employed in manufacturing industries. Large numbers of auditors were also employed in the finance, insurance, and real estate industries (34 percent); and in public utilities (14 percent).

*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),

<sup>4</sup> Work levels used to compute 1979-80 increases were: Clerical—All clerical levels. Technical support—All levels of engineering technicians and drafters, and computer operators I, II, III, IV, and V. Entry and developmental professional and administrative—Accountants I and II; auditors I and II; public accountants I and II; attorneys I; job analysts II; chemists I and II; and engineers I and II. Experienced professional and administrative—Accountants III, IV, and V; public accountants III and IV; public accountants III and IV; auditors III and IV; chief accountants I, II, III, and IV; attorneys II, III, IV, V, and VI; job analysts III and IV; directors of personnel I, II, III, and IV; chemists III, IV, V, VI, and VII; and engineers III, IV, V, VI, VII, and VIII.

A few survey levels, not readily identifiable with any of the four occupational categories, were not used.

Unlike text table 2, increases in chart 1 do not reflect differences in the relative employment size of various occupational levels. See appendix A for a discussion of the methods used to calculate each of the trend series.

<sup>5</sup> Survey data for 1971-72 did not represent a 12-month period due to changes in survey timing. Increases for this year have been prorated to represent a 12-month period.

<sup>6</sup> Classification of employees in the occupations and work levels surveyed is based on factors detailed in the definitions in appendix C.

**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 and II	25 - 29	Public accountants II
	File clerks I, II, and III		Auditors II
	Key entry operators I and II		Attorneys I
	Personnel clerks I, II, and III		Engineering technicians I
90 - 94	Secretaries I, II, III, IV, and V	20 - 24	Public accountants III
	Stenographers, general and senior		Buyers II
	Typists I and II		Directors of personnel I
			Chemists II
85 - 89	Personnel clerks IV	15 - 19	Drafters II
			Computer operators IV
80 - 84	Accounting clerks IV	10 - 14	Accountants III
	Personnel clerks V		Attorneys II
70 - 74	Job analysts I and II		Directors of personnel II
			Engineering technicians II
55 - 59	Job analysts III	5 - 9	Computer operators V
			Public accountants IV
50 - 54	Computer operators II		Auditors III
	Messengers		Attorneys III
45 - 49	Buyers I	Directors of personnel III	
		Chemists III	
35 - 39	Accountants I	Engineers I	
	Job analysts IV	Drafters III	
	Chemists I	Computer operators VI	
30 - 34	Computer operators I		Accountants IV
			Auditors IV
	Accountants II		Chief accountants II
	Public accountants I		Attorneys IV and V
	Auditors I	Buyers III	
	Drafters I	Chemists IV	
	Computer operators III	Engineers II	
		Engineering technicians III	
		Drafters IV	

**Text table 2. Percent increases in average salaries by occupation and group, 1970-80<sup>1</sup>**

Occupation and group	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
All survey occupations <sup>3</sup>	6.6	5.8	5.4	6.4	9.0	7.0	6.9	7.9	7.8	9.1
Professional, administrative, and technical support .	6.7	5.5	5.4	6.3	8.3	6.7	7.1	8.3	7.7	9.3
Accountants .	6.7	5.6	4.9	6.1	9.8	6.4	7.8	8.3	8.0	9.2
Auditors . . . . .	7.0	5.5	5.2	5.2	6.8	5.5	6.8	8.2	6.5	8.8
Public accountants . . . . .	4	4	4	4	4	4	4	4	5	4.2
Chief accountants .	9.1	3.9	5.8	7.2	8.6	6.6	10.5	8.0	7.7	11.3
Attorneys	5.0	6.1	6.3	5.8	7.6	6.1	5.4	9.1	8.9	9.3
Buyers . . . . .	7.0	6.3	5.0	6.0	9.2	6.7	7.0	7.8	7.0	8.1
Job analysts . . . . .	7.7	6.8	5.2	6.1	7.5	6.0	6.5	7.2	8.6	8.1
Directors of personnel	8.0	3.9	7.5	7.2	6.1	7.8	9.1	10.0	7.5	11.2
Chemists . . . . .	5.5	5.1	3.7	7.1	10.1	6.6	7.0	9.0	7.6	9.8
Engineers . . . . .	5.7	5.2	5.1	5.4	8.4	6.8	6.4	9.0	8.4	9.8
Engineering technicians	6.5	5.1	4.7	6.0	9.0	8.1	7.2	7.1	7.6	11.0
Drafters . . . . .	5.6	7.2	6.2	6.7	8.0	7.4	6.0	7.1	5	11.8
Computer operators	4	4	4	5	4	5	5.4	8.5	7.2	8.3
Clerical <sup>3</sup>	6.5	6.1	5.4	6.4	9.6	7.3	6.6	7.4	7.8	8.8
Accounting clerks .	6.0	6.0	4.6	6.9	7.7	7.2	6.9	6.2	5	8.9
File clerks . . . . .	6.1	5.5	5.9	5.4	9.6	6.4	5.5	9.7	5.5	9.3
Key entry operators	7.0	6.8	5.4	7.3	9.9	7.6	5.9	7.1	6.8	9.1
Messengers . . . . .	6.7	6.3	5.1	5.6	10.1	7.4	7.5	6.0	6.8	5.5
Personnel clerks .	4	4	4	5	4	4	4	4	5	8.6
Secretaries . . . . .	6.6	6.1	5.1	4	5	6.4	6.5	7.3	9.6	
Stenographers . . . . .	7.5	6.4	5.2	6.5	11.6	8.0	7.9	8.2	12.1	10.1
Typists . . . . .	6.1	5.7	4.0	6.7	9.9	7.1	6.2	8.0	8.5	8.9

<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> Data for keypunch supervisors, surveyed from 1970 to 1976, are included in the all-occupations average and the occupational group averages for periods surveyed.

<sup>4</sup> Not surveyed.

<sup>5</sup> Comparable data not available for both years.

NOTE: For method of computation, see appendix A.

**Text table 3. Percent increases in average salaries by work level category, 1970-80**

Period	Group A (GS grades 1-4)	Group B (GS grades 5-9)	Group C (GS grades 11-15)
1970-80	99.6	93.8	101.8
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

<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 GS grades, see appendix D.

averaged \$2,362 a month. Chief accountants IV,<sup>7</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 \$4,173 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.

Among the four levels of *public accountants* surveyed, average monthly salaries ranged from \$1,247 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 \$1,992 for public accountants who direct the field work for large or complex audits (level IV).<sup>8</sup> 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 \$1,743 a month. Attorneys in the top level surveyed, level VI, averaged \$5,053 a month. These attorneys deal with legal matters of major importance to their organization, and are usually subordinate only to the general counsel or an immediate deputy in very large companies. Finance, insurance, and real estate industries employed one-half of the attorneys, and manufacturing industries employed almost one-third.<sup>9</sup>

*Buyers* averaged \$1,238 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 highly complex and technical items, materials, or services, averaged \$2,315 a month. Manufacturing industries employed 83 percent of the buyers in the four levels.

In personnel management, four work levels of *job analysts* and five levels of *directors of personnel* were studied. Job analysts I averaged \$1,338 compared with \$2,193 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. Provisions are made in the definition of weighting various combinations of duties and responsibilities to determine the level. Among personnel directors, average monthly salaries ranged from \$2,060 for level I to \$4,144 for level IV.<sup>10</sup> Manufacturing industries employed 54 percent of the job analysts and 69 percent of the directors of personnel in the study; the finance, insurance, and real estate industries ranked next with 28 percent of the job analysts and 13 percent of the directors of personnel.

*Chemists and engineers* each are surveyed in eight levels.<sup>11</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 difficult problem areas where the chemist or engineer is a recognized authority and where solutions would represent a major scientific or technological advance.<sup>12</sup> Average monthly salaries ranged from \$1,350 for chemists I to \$3,824 for chemists VII, the highest level for which data could be presented and from \$1,618 for engineers I to \$4,173 for engineers VIII.

Level IV represents the largest group in each series; it includes professional employees who are fully competent in all technical aspects of their assignments, work with considerable independence, and in some cases,

<sup>7</sup> Although chief accountants V, directors of personnel V, and chemists VIII were surveyed, as defined in appendix C, data for these occupational levels did not meet publication criteria for this survey.

<sup>8</sup> In the survey coding structure, the level designations among various accounting jobs are not synonymous, e.g., public accountants levels I-IV equate to levels II-V for accountants. For more information see appendix D.

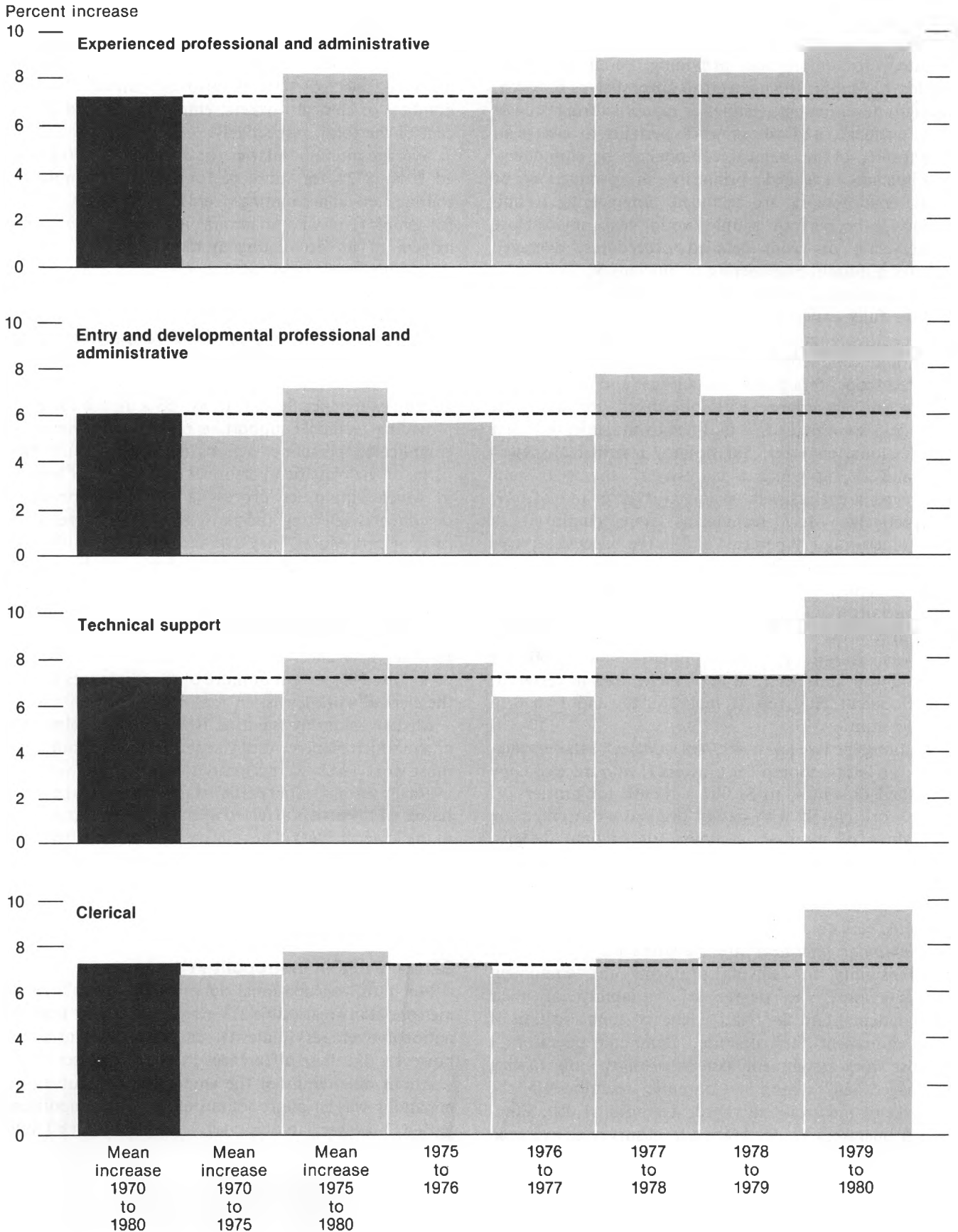
<sup>9</sup> The survey excludes establishments primarily offering legal advice or legal service.

<sup>10</sup> See footnote 7.

<sup>11</sup> See footnote 7.

<sup>12</sup> Top positions of some companies with unusually extensive and complex engineering or chemical programs are above that level.

**Chart 1. Increases in average salaries for selected occupational groups, 1970 to 1980**



supervise a few professional and technical workers. Manufacturing industries accounted for 92 percent of all chemists and 74 percent of all engineers, the selected services accounted for 4 and 15 percent, respectively.

The five-level series for *engineering technicians* is limited to employees providing semiprofessional technical support to engineers 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 \$1,019 a month. Engineering technicians V, the highest level surveyed, averaged \$1,860 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 \$1,396 and \$1,629, respectively. Most technicians were employed in manufacturing (79 percent) and in the selected services studied (13 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, and in research, development, and testing laboratories, and 1 to 6 in public utilities.

Among the five levels *drafters* surveyed, salaries ranged from \$851 a month for drafters I, who trace or copy finished drawings, to \$1,807 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 about the same proportion as engineers, with 70 percent in manufacturing, 7 percent in public utilities, and 15 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 \$847 a month. Computer operators III, the largest of the group surveyed, averaged \$1,080. Computer operators VI, the highest level surveyed, averaged \$1,626 a month.

Among the survey's 8 *clerical jobs*, employment as secretary exceeded that of any other classification. Average monthly salaries for secretaries ranged from

\$941 at level I to \$1,428 at level V. Average salaries of \$922 and \$1,156 were reported for general and senior stenographers; and \$763 and \$918 for the two levels of typists. Manufacturing industries employed 43 percent of the clerical employees classified in the survey occupations. The finance, insurance and real estate industries and the selected services also accounted for large numbers of clerical workers, employing 24 and 20 percent of the total, respectively.

Average monthly salaries for *accounting clerks* ranged from \$734 for those performing very simple and routine clerical accounting operations (level I) to \$1,280 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 \$865 and \$1,027 a month, respectively.

Five levels of *personnel clerks (employment)* were surveyed. Salaries ranged from \$799 a month for clerks performing routine tasks while receiving training and gaining experience (level I) to \$1,653 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 \$961 a month.

In 19 of the 24 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 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.

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 (i.e., salaries in the upper halves of the arrays affected averages more than salaries in the lower halves). The relative difference between the mean and median was less than 2 percent for 32 of the 91 work levels, from 2 to 4 percent in 36 work levels, and from 4 to 7.5 percent in the other 23 levels.

### Salary levels in metropolitan areas

For most occupational levels, average salaries in metropolitan areas (table 2) were slightly higher than the national averages (table 1). In only four instances, however, did these differences exceed 1.0 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 and public accountants were employed in metropolitan areas. In 53 of the 91 work levels, 90 percent or more of the employment was 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 80 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 36 percent of all employees in the 80 occupational levels—ranging from 7 percent of the directors of personnel II and 10 percent of file clerks I to 77 percent for engineering technicians V. The proportion was near one-third for most professional, administrative, and technical support occupations although for the numerically important engineer and engineering technician occupations the proportion was 52 percent. The proportion was 29 percent for employees in clerical occupations.

Salary levels in large establishments expressed as percents of levels in all establishments, combined, ranged from 96 to 121 and averaged 108 for the 80 levels. Salary levels in large establishments exceeded all-establishment averages by 5 percent or more in all but two of the clerical levels, but in only 34 to 57 nonclerical levels, as shown by the following tabulation (all-establishment average for each occupational level = 100 percent):

	<i>Professional, administrative, and technical</i>	<i>Clerical</i>
Total number of levels . . .	57	23
95-99 percent . . . . .	2	-
100-104 percent . . . . .	21	2
105-109 percent . . . . .	23	4
110-114 percent . . . . .	11	11
115 percent and over . . . . .	-	6

As expected, 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 all 91 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 in all occupations at all work levels overlapped substantially. (Also, salary ranges for established pay grades or work levels within individual firms often overlapped substantially.)

Charts 2 and 3 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 75 of the 91 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; variations in occupational employment among industries, as illustrated in table 7 and chart 4; 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 regional or national basis.

### Pay differences by industry

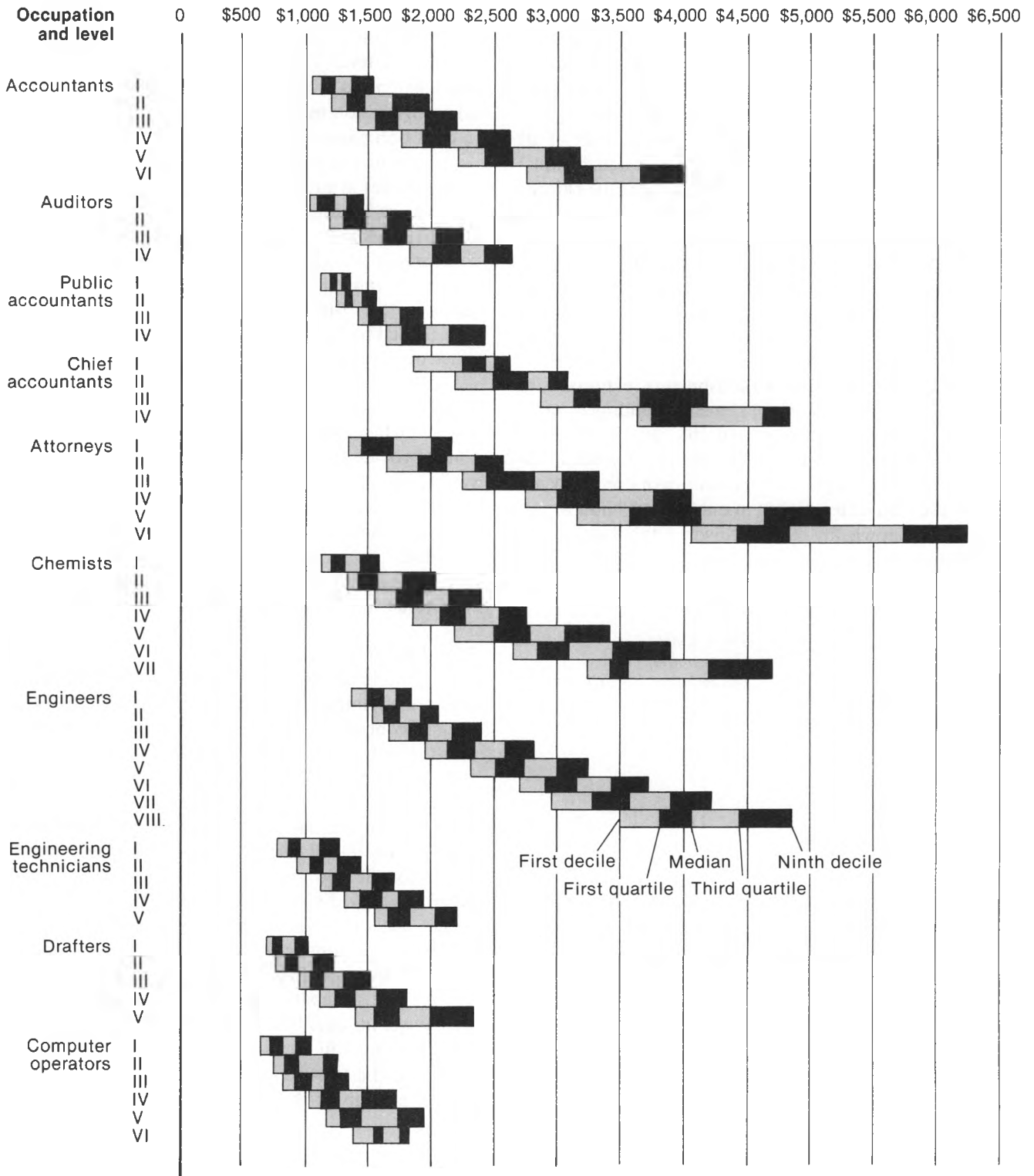
By combining data for all levels of work in each occupation, relative salary levels in major industry divisions may be compared to each other and to salary levels in all industries combined (table 8).

Relative salary levels for the 13 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 13 occupations. Relative salary levels in mining and public utilities were generally the highest among the industry divisions compared.

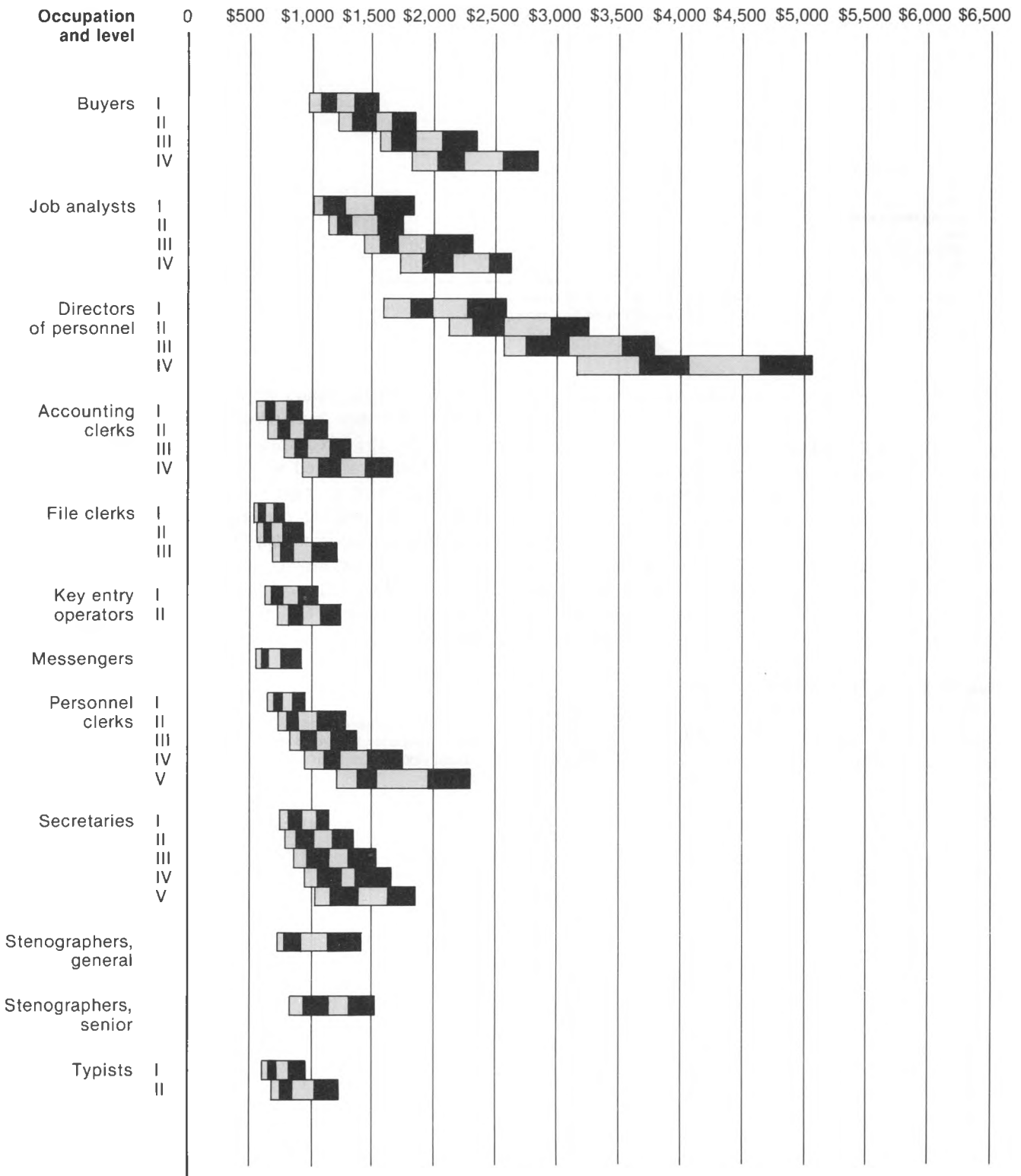
For most occupations studied, relative salary levels were lower in retail trade and in finance, insurance, and real estate than in other industry divisions. Where retail trade and the finance industries contributed a substantial proportion of the total employment in an occupa-

<sup>13</sup> For analysis of interarea pay differentials in clerical salaries, see *Area Wage Surveys: Metropolitan Areas, United States and Regional Summaries, 1976*, Bulletin 1900-82 (Bureau of Labor Statistics, 1979) and *Wage Differences Among Metropolitan Areas, 1978*, Summary 79-17 (Bureau of Labor Statistics, 1979).

**Chart 2. Salaries in professional and technical occupations, March 1980**  
 Median monthly salaries and ranges within which fell 50 percent and 80 percent of employees



**Chart 3. Salaries in administrative and clerical occupations, March 1980**  
 Median monthly salaries and ranges within which fell 50 percent and 80 percent of employees



**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 . . . . .	91	5	22	32	21	11
Accountants . . . . .	6	—	3	3	—	—
Public accountants . . . . .	4	2	2	—	—	—
Auditors . . . . .	4	—	2	2	—	—
Chief accountants . . . . .	4	1	2	1	—	—
Attorneys . . . . .	6	—	—	3	2	1
Buyers . . . . .	4	—	—	4	—	—
Job analysts . . . . .	4	—	—	1	2	1
Directors of personnel . . . . .	4	—	—	3	1	—
Chemists . . . . .	7	—	3	4	—	—
Engineers . . . . .	8	1	7	—	—	—
Engineering technicians . . . . .	5	—	3	2	—	—
Drafters . . . . .	5	—	—	4	1	—
Computer operators . . . . .	6	1	—	—	3	2
Clerical workers . . . . .	24	—	—	5	12	7

<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.

tion, the average salary for all industries combined was lowered, 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 (111 percent of the all-industry level in manufacturing and 121 percent in public utilities) reflected the influence of lower salaries for the high proportion (62 percent) of these workers employed in the finance industries. The finance industries, however, also reported slightly shorter average standard workweeks than the other industries surveyed, as shown in table 9.

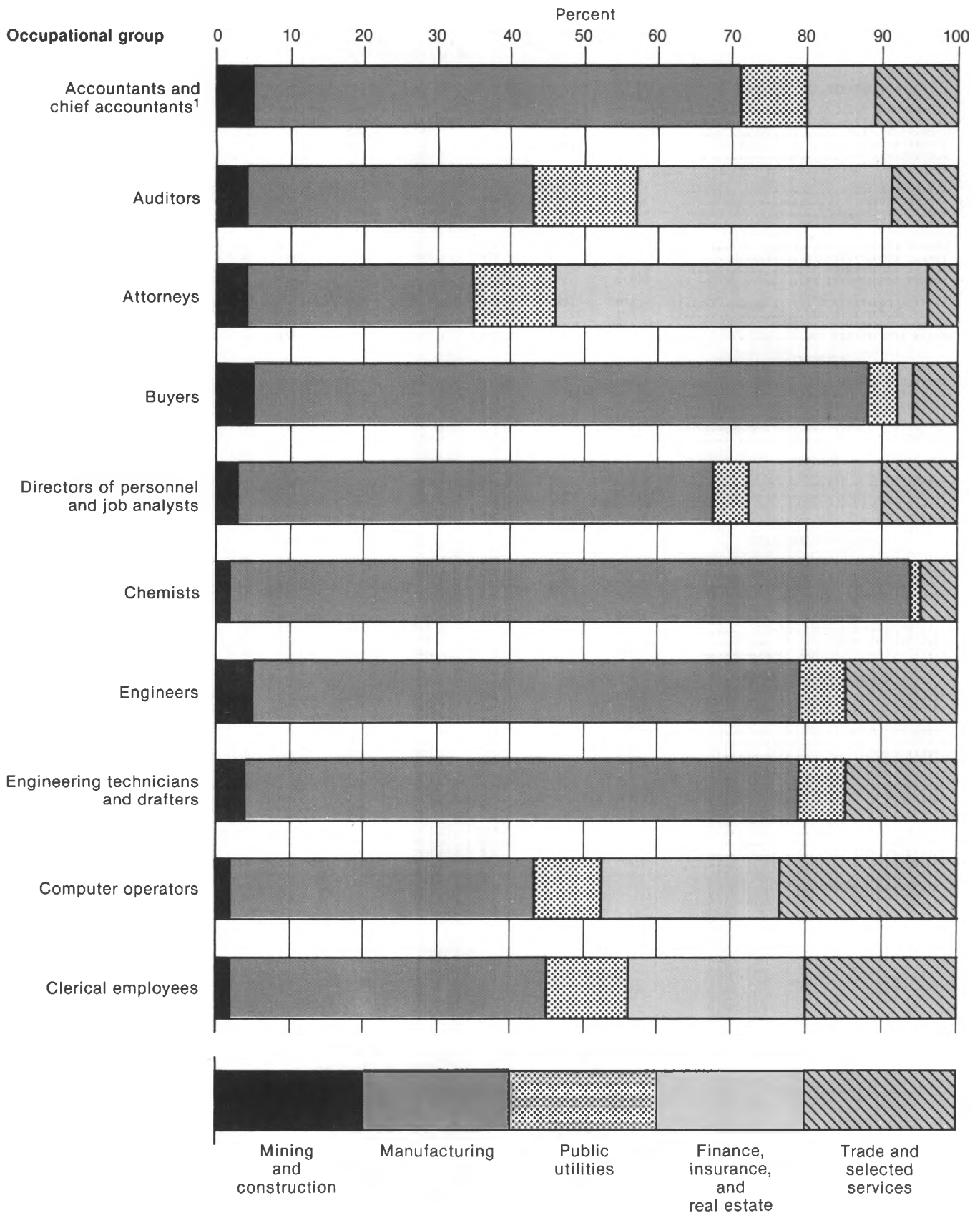
**Average standard weekly hours**

The length of the standard workweek, on which the regular straight-time salary is based, was obtained for individual employees in occupations studied. When in-

dividual 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 divisions 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>14</sup> For information on scheduled weekly hours of office workers employed in metropolitan areas, see *Area Wage Surveys, Selected Metropolitan Areas, 1977*, Bulletin 1950-76 (Bureau of Labor Statistics, 1979).

**Chart 4. Relative employment in selected occupational groups by industry division, March 1980**



<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 1980)

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 QUANTILE	THIRD QUANTILE			FIRST QUANTILE	THIRD QUANTILE
<b>ACCOUNTANTS AND AUDITORS</b>									
ACCOUNTANTS I.....	12,182	\$1,262	\$1,245	\$1,130	\$1,374	\$15,189	\$14,940	\$13,556	\$16,493
ACCOUNTANTS II.....	19,560	1,536	1,475	1,333	1,699	18,427	17,700	15,996	20,392
ACCOUNTANTS III.....	32,903	1,775	1,733	1,558	1,962	21,299	20,792	18,693	23,544
ACCOUNTANTS IV.....	20,312	2,180	2,144	1,958	2,388	26,158	25,728	23,491	28,656
ACCOUNTANTS V.....	7,452	2,661	2,624	2,405	2,899	31,937	31,487	28,960	34,786
ACCOUNTANTS VI.....	1,100	3,358	3,290	3,043	3,665	40,292	39,484	36,516	43,982
AUDITORS I.....	1,770	1,238	1,225	1,090	1,333	14,858	14,700	13,078	15,996
AUDITORS II.....	3,521	1,500	1,480	1,299	1,665	18,002	17,760	15,594	19,980
AUDITORS III.....	4,437	1,836	1,805	1,616	2,028	22,026	21,662	19,392	24,340
AUDITORS IV.....	3,076	2,232	2,229	2,000	2,415	26,782	26,748	24,000	28,980
PUBLIC ACCOUNTANTS I.....	7,960	1,247	1,250	1,200	1,299	14,958	14,994	14,400	15,594
PUBLIC ACCOUNTANTS II.....	7,649	1,391	1,374	1,308	1,458	16,689	16,493	15,694	17,493
PUBLIC ACCOUNTANTS III.....	6,799	1,650	1,616	1,500	1,766	19,806	19,392	18,000	21,192
PUBLIC ACCOUNTANTS IV.....	2,972	1,992	1,942	1,774	2,149	23,900	23,304	21,291	25,792
CHIEF ACCOUNTANTS I <sup>6</sup> .....	559	2,362	2,430	2,235	2,500	28,347	29,160	26,825	30,000
CHIEF ACCOUNTANTS II <sup>6</sup> .....	891	2,722	2,782	2,500	2,924	32,662	33,387	30,000	35,090
CHIEF ACCOUNTANTS III <sup>6</sup> .....	656	3,424	3,333	3,120	3,677	41,092	39,996	37,435	44,118
CHIEF ACCOUNTANTS IV <sup>6</sup> .....	100	4,173	4,057	3,750	4,628	50,073	48,681	45,000	55,536
<b>ATTORNEYS</b>									
ATTORNEYS I.....	1,629	1,743	1,700	1,460	2,000	20,911	20,400	17,520	24,000
ATTORNEYS II.....	2,776	2,129	2,124	1,900	2,356	25,549	25,488	22,800	28,276
ATTORNEYS III.....	3,174	2,753	2,717	2,450	3,035	33,034	32,600	29,400	36,240
ATTORNEYS IV.....	2,753	3,405	3,332	3,000	3,770	40,864	39,984	36,000	45,243
ATTORNEYS V.....	1,802	4,155	4,115	3,583	4,623	49,864	49,380	42,996	55,478
ATTORNEYS VI <sup>6</sup> .....	622	5,053	4,833	4,417	5,750	60,641	57,996	53,004	69,000
<b>BUYERS</b>									
BUYERS I.....	6,520	1,238	1,207	1,080	1,350	14,861	14,482	12,960	16,200
BUYERS II.....	18,432	1,539	1,515	1,360	1,675	18,467	18,180	16,320	20,100
BUYERS III.....	16,479	1,909	1,874	1,674	2,086	22,904	22,491	20,092	25,027
BUYERS IV.....	5,187	2,315	2,249	2,025	2,583	27,777	26,989	24,300	31,000
<b>PERSONNEL MANAGEMENT</b>									
JOB ANALYSTS I.....	130	1,338	1,294	1,100	1,510	16,056	15,529	13,203	18,119
JOB ANALYSTS II.....	436	1,400	1,325	1,205	1,562	16,795	15,903	14,460	18,743
JOB ANALYSTS III.....	648	1,790	1,711	1,575	1,949	21,484	20,536	18,900	23,391
JOB ANALYSTS IV.....	546	2,193	2,165	1,916	2,457	26,315	25,980	22,991	29,488
DIRECTORS OF PERSONNEL I.....	1,200	2,060	1,999	1,816	2,282	24,719	23,990	21,795	27,389
DIRECTORS OF PERSONNEL II.....	1,459	2,653	2,582	2,312	2,966	31,832	30,988	27,744	35,593
DIRECTORS OF PERSONNEL III <sup>6</sup> .....	921	3,151	3,100	2,750	3,511	37,816	37,200	33,000	42,129
DIRECTORS OF PERSONNEL IV <sup>6</sup> .....	326	4,144	4,068	3,685	4,632	49,730	48,816	44,215	55,582
<b>CHEMISTS AND ENGINEERS</b>									
CHEMISTS I.....	2,824	1,350	1,333	1,208	1,454	16,200	15,994	14,494	17,448
CHEMISTS II.....	5,299	1,631	1,585	1,438	1,785	19,571	19,020	17,253	21,420
CHEMISTS III.....	10,192	1,948	1,929	1,716	2,141	23,373	23,150	20,592	25,690
CHEMISTS IV.....	10,519	2,307	2,285	2,074	2,526	27,681	27,420	24,890	30,312
CHEMISTS V.....	8,135	2,816	2,795	2,500	3,074	33,793	33,540	30,000	36,885
CHEMISTS VI.....	4,532	3,178	3,086	2,850	3,440	38,137	37,027	34,200	41,280
CHEMISTS VII.....	1,695	3,824	3,565	3,418	4,200	45,883	42,783	41,015	50,400
ENGINEERS I.....	20,813	1,618	1,624	1,500	1,739	19,411	19,488	18,000	20,868
ENGINEERS II.....	41,742	1,774	1,750	1,624	1,910	21,285	21,000	19,492	22,924
ENGINEERS III.....	95,382	2,013	1,985	1,820	2,188	24,160	23,821	21,840	26,256
ENGINEERS IV.....	123,829	2,374	2,350	2,142	2,593	28,486	28,200	25,705	31,111
ENGINEERS V.....	92,315	2,762	2,737	2,503	3,000	33,141	32,844	30,033	36,000
ENGINEERS VI.....	42,719	3,188	3,160	2,909	3,441	38,259	37,920	34,913	41,295
ENGINEERS VII.....	14,297	3,604	3,590	3,291	3,939	43,242	43,080	39,496	46,908
ENGINEERS VIII.....	3,027	4,173	4,082	3,825	4,451	50,079	48,980	45,900	53,414

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 1980)

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 RANGE <sup>5/</sup>		MEAN	MEDIAN	MIDDLE RANGE <sup>5/</sup>	
				FIRST QUARTILE	THIRD QUARTILE			FIRST QUARTILE	THIRD QUARTILE
<b>TECHNICAL SUPPORT</b>									
ENGINEERING TECHNICIANS I.....	4,782	\$1,019	\$984	\$878	\$1,112	\$12,228	\$11,804	\$10,532	\$13,348
ENGINEERING TECHNICIANS II.....	17,441	1,184	1,156	1,050	1,280	14,212	13,869	12,595	15,360
ENGINEERING TECHNICIANS III.....	29,527	1,396	1,364	1,226	1,534	16,756	16,373	14,712	18,411
ENGINEERING TECHNICIANS IV.....	34,128	1,629	1,614	1,460	1,773	19,547	19,365	17,519	21,281
ENGINEERING TECHNICIANS V.....	18,054	1,860	1,840	1,686	2,022	22,323	22,080	20,230	24,264
DRAFTERS I.....	2,581	851	821	750	930	10,216	9,854	9,000	11,158
DRAFTERS II.....	11,764	974	946	850	1,072	11,689	11,352	10,200	12,868
DRAFTERS III.....	22,813	1,192	1,150	1,040	1,304	14,308	13,800	12,475	15,642
DRAFTERS IV.....	26,622	1,435	1,400	1,251	1,580	17,215	16,800	15,016	18,960
DRAFTERS V.....	20,485	1,807	1,751	1,556	1,999	21,690	21,012	18,666	23,984
COMPUTER OPERATORS I.....	6,837	847	819	725	946	10,164	9,828	8,700	11,355
COMPUTER OPERATORS II.....	6,285	1,001	956	851	1,158	12,016	11,471	10,212	13,890
COMPUTER OPERATORS III.....	29,710	1,080	1,050	916	1,186	12,957	12,595	10,996	14,234
COMPUTER OPERATORS IV.....	16,430	1,337	1,294	1,142	1,479	16,050	15,525	13,704	17,753
COMPUTER OPERATORS V.....	3,729	1,538	1,477	1,297	1,747	18,454	17,728	15,559	20,960
COMPUTER OPERATORS VI.....	734	1,626	1,609	1,535	1,758	19,511	19,313	18,420	21,092
<b>CLERICAL</b>									
ACCOUNTING CLERKS I.....	31,935	734	702	626	802	8,806	8,421	7,508	9,620
ACCOUNTING CLERKS II.....	88,878	865	820	728	947	10,377	9,840	8,733	11,364
ACCOUNTING CLERKS III.....	62,378	1,027	983	869	1,150	12,328	11,794	10,428	13,800
ACCOUNTING CLERKS IV.....	21,803	1,280	1,250	1,060	1,469	15,358	14,994	12,722	17,623
FILE CLERKS I.....	27,876	657	630	569	706	7,889	7,560	6,830	8,472
FILE CLERKS II.....	14,721	736	687	616	789	8,829	8,244	7,395	9,468
FILE CLERKS III.....	4,040	919	868	756	1,000	11,026	10,416	9,072	12,000
KEY ENTRY OPERATORS I.....	66,771	832	782	695	905	9,981	9,385	8,342	10,860
KEY ENTRY OPERATORS II.....	44,532	977	937	808	1,085	11,723	11,241	9,698	13,020
MESSENGERS.....	18,360	713	663	600	760	8,561	7,953	7,200	9,120
PERSONNEL CLERKS I.....	2,273	799	760	700	850	9,591	9,125	8,397	10,200
PERSONNEL CLERKS II.....	5,343	961	904	805	1,047	11,529	10,848	9,660	12,570
PERSONNEL CLERKS III.....	3,930	1,075	1,043	915	1,187	12,896	12,514	10,975	14,244
PERSONNEL CLERKS IV.....	1,942	1,311	1,243	1,108	1,480	15,726	14,919	13,296	17,760
PERSONNEL CLERKS V.....	584	1,653	1,530	1,380	1,965	19,837	18,360	16,560	23,579
SECRETARIES I.....	42,766	941	920	823	1,040	11,296	11,040	9,880	12,480
SECRETARIES II.....	83,137	1,051	1,019	894	1,183	12,611	12,223	10,728	14,194
SECRETARIES III.....	90,534	1,168	1,133	980	1,308	14,018	13,596	11,760	15,694
SECRETARIES IV.....	50,005	1,282	1,245	1,066	1,460	15,382	14,940	12,795	17,520
SECRETARIES V.....	16,200	1,428	1,398	1,177	1,642	17,132	16,776	14,124	19,709
STENOGRAPHERS, GENERAL.....	20,980	992	925	791	1,147	11,899	11,106	9,496	13,765
STENOGRAPHERS, SENIOR.....	19,333	1,156	1,152	963	1,313	13,876	13,828	11,551	15,756
TYPISTS I.....	43,586	763	720	650	817	9,161	8,640	7,797	9,802
TYPISTS II.....	27,621	918	866	750	1,021	11,010	10,396	8,996	12,253

<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.

<sup>6</sup> Salary data were not available for 5 to 9 percent of the chief accountants I, II, III, and IV, attorneys VI and directors of personnel III; and for 12 and 30 percent of the directors of personnel II and IV, respectively.



**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 1980)

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>ACCOUNTANTS AND AUDITORS</b>									
ACCOUNTANTS I.....	10,615	\$1,271	\$1,250	\$1,145	\$1,375	\$15,258	\$14,994	\$13,745	\$16,500
ACCOUNTANTS II.....	17,454	1,550	1,494	1,341	1,724	18,598	17,928	16,094	20,691
ACCOUNTANTS III.....	28,428	1,786	1,741	1,559	1,995	21,430	20,892	18,713	23,940
ACCOUNTANTS IV.....	18,211	2,184	2,145	1,958	2,400	26,211	25,740	23,496	28,800
ACCOUNTANTS V.....	6,746	2,665	2,624	2,405	2,900	31,981	31,487	28,865	34,800
ACCOUNTANTS VI.....	1,023	3,346	3,294	3,042	3,640	40,155	39,532	36,504	43,680
AUDITORS I.....	1,750	1,237	1,225	1,086	1,333	14,847	14,700	13,035	15,994
AUDITORS II.....	3,389	1,497	1,475	1,299	1,609	17,367	17,700	15,594	19,788
AUDITORS III.....	4,179	1,837	1,814	1,604	2,041	22,038	21,768	19,242	24,490
AUDITORS IV.....	2,959	2,231	2,217	1,999	2,415	26,767	26,604	23,990	28,980
PUBLIC ACCOUNTANTS I.....	7,960	1,247	1,250	1,200	1,299	14,958	14,994	14,400	15,584
PUBLIC ACCOUNTANTS II.....	7,649	1,391	1,374	1,308	1,458	16,689	16,489	15,694	17,493
PUBLIC ACCOUNTANTS III.....	6,799	1,650	1,616	1,500	1,766	19,806	19,392	18,000	21,192
PUBLIC ACCOUNTANTS IV.....	2,972	1,992	1,942	1,774	2,149	23,900	23,304	21,291	25,792
CHIEF ACCOUNTANTS I.....	450	2,351	2,429	2,179	2,500	28,210	29,146	26,150	30,000
CHIEF ACCOUNTANTS II.....	741	2,744	2,800	2,557	2,964	32,930	33,600	30,684	35,563
CHIEF ACCOUNTANTS III.....	607	3,445	3,333	3,133	3,775	41,341	39,996	37,601	45,300
CHIEF ACCOUNTANTS IV.....	100	4,173	4,057	3,750	4,628	50,073	48,681	45,000	55,536
<b>ATTORNEYS</b>									
ATTORNEYS I.....	1,608	1,742	1,700	1,475	2,000	20,904	20,400	17,700	24,000
ATTORNEYS II.....	2,710	2,128	2,124	1,900	2,354	25,535	25,488	22,800	28,248
ATTORNEYS III.....	3,054	2,754	2,707	2,433	3,050	33,045	32,487	29,200	36,600
ATTORNEYS IV.....	2,700	3,414	3,332	3,015	3,770	40,968	39,984	36,186	45,243
ATTORNEYS V.....	1,730	4,179	4,128	3,625	4,635	50,147	49,536	43,500	55,625
ATTORNEYS VI.....	618	5,055	4,833	4,417	5,750	60,657	57,996	53,004	69,000
<b>BUYERS</b>									
BUYERS I.....	5,590	1,239	1,200	1,080	1,349	14,866	14,400	12,960	16,188
BUYERS II.....	15,210	1,549	1,521	1,373	1,686	18,593	18,249	16,476	20,230
BUYERS III.....	14,882	1,923	1,891	1,684	2,100	23,077	22,691	20,209	25,200
BUYERS IV.....	4,883	2,320	2,251	2,025	2,595	27,839	27,009	24,300	31,140
<b>PERSONNEL MANAGEMENT</b>									
JOB ANALYSTS I.....	129	1,338	1,294	1,100	1,510	16,057	15,529	13,203	18,119
JOB ANALYSTS II.....	412	1,404	1,345	1,208	1,562	16,843	16,140	14,494	18,743
JOB ANALYSTS III.....	634	1,795	1,722	1,590	1,944	21,534	20,662	19,080	23,324
JOB ANALYSTS IV.....	523	2,200	2,166	1,917	2,448	26,404	25,992	23,001	29,378
DIRECTORS OF PERSONNEL I.....	932	2,101	2,016	1,833	2,282	25,207	24,193	21,991	27,389
DIRECTORS OF PERSONNEL II.....	1,305	2,639	2,558	2,291	2,965	31,665	30,696	27,489	35,580
DIRECTORS OF PERSONNEL III.....	826	3,155	3,108	2,749	3,511	37,866	37,296	32,987	42,129
DIRECTORS OF PERSONNEL IV.....	305	4,124	4,066	3,624	4,625	49,486	48,792	43,483	55,500
<b>CHEMISTS AND ENGINEERS</b>									
CHEMISTS I.....	2,534	1,355	1,338	1,210	1,464	16,260	16,062	14,520	17,570
CHEMISTS II.....	4,761	1,640	1,600	1,441	1,792	19,680	19,200	17,293	21,502
CHEMISTS III.....	8,605	1,953	1,938	1,726	2,150	23,438	23,254	20,712	25,800
CHEMISTS IV.....	8,956	2,305	2,291	2,079	2,526	27,666	27,489	24,948	30,312
CHEMISTS V.....	6,727	2,811	2,799	2,499	3,074	33,736	33,591	29,988	36,885
CHEMISTS VI.....	3,975	3,194	3,099	2,849	3,500	38,328	37,185	34,190	42,000
CHEMISTS VII.....	1,499	3,826	3,548	3,445	4,210	45,906	42,573	41,340	50,520
ENGINEERS I.....	18,606	1,621	1,625	1,501	1,742	19,451	19,500	18,011	20,910
ENGINEERS II.....	37,228	1,782	1,760	1,629	1,921	21,378	21,117	19,553	23,052
ENGINEERS III.....	84,715	2,020	1,998	1,825	2,200	24,238	23,976	21,899	26,400
ENGINEERS IV.....	112,600	2,381	2,360	2,150	2,600	28,577	28,320	25,800	31,200
ENGINEERS V.....	85,412	2,766	2,745	2,507	3,009	33,198	32,940	30,084	36,104
ENGINEERS VI.....	40,586	3,194	3,165	2,913	3,450	38,324	37,985	34,956	41,399
ENGINEERS VII.....	13,630	3,604	3,585	3,291	3,900	43,253	43,026	39,496	46,800
ENGINEERS VIII.....	2,883	4,169	4,075	3,819	4,448	50,022	48,900	45,831	53,376

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 1980)

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.....	4,077	\$1,027	\$996	\$886	\$1,125	\$12,319	\$11,955	\$10,637	\$13,500
ENGINEERING TECHNICIANS II.....	14,661	1,192	1,160	1,051	1,301	14,303	13,921	12,618	15,611
ENGINEERING TECHNICIANS III.....	25,737	1,398	1,369	1,220	1,535	16,774	16,424	14,641	18,420
ENGINEERING TECHNICIANS IV.....	30,993	1,633	1,620	1,464	1,785	19,592	19,438	17,571	21,420
ENGINEERING TECHNICIANS V.....	16,999	1,862	1,841	1,683	2,026	22,341	22,087	20,196	24,312
DRAFTERS I.....	2,192	854	817	756	921	10,248	9,802	9,072	11,055
DRAFTERS II.....	10,390	978	945	850	1,077	11,733	11,340	10,200	12,618
DRAFTERS III.....	19,596	1,202	1,156	1,040	1,315	14,423	13,869	12,480	15,780
DRAFTERS IV.....	23,454	1,444	1,416	1,252	1,599	17,327	16,993	15,024	19,192
DRAFTERS V.....	19,025	1,821	1,768	1,564	2,020	21,851	21,216	18,770	24,240
COMPUTER OPERATORS I.....	6,221	854	822	733	947	10,246	9,865	8,801	11,367
COMPUTER OPERATORS II.....	5,251	1,014	975	860	1,217	12,170	11,700	10,324	14,599
COMPUTER OPERATORS III.....	26,786	1,090	1,057	927	1,198	13,078	12,684	11,129	14,376
COMPUTER OPERATORS IV.....	14,961	1,344	1,298	1,147	1,487	16,128	15,579	13,765	17,844
COMPUTER OPERATORS V.....	3,391	1,539	1,477	1,291	1,747	18,472	17,728	15,494	20,960
COMPUTER OPERATORS VI.....	675	1,624	1,609	1,538	1,777	19,490	19,313	18,454	21,326
<b>CLERICAL</b>									
ACCOUNTING CLERKS I.....	29,216	732	700	625	803	8,785	8,400	7,500	9,635
ACCOUNTING CLERKS II.....	78,520	873	825	735	952	10,471	9,900	8,820	11,424
ACCOUNTING CLERKS III.....	56,889	1,032	986	869	1,155	12,384	11,836	10,428	13,860
ACCOUNTING CLERKS IV.....	20,196	1,280	1,250	1,062	1,461	15,354	14,994	12,743	17,529
FILE CLERKS I.....	24,056	648	625	565	687	7,771	7,500	6,780	8,238
FILE CLERKS II.....	13,419	734	685	615	788	8,809	8,220	7,383	9,460
FILE CLERKS III.....	3,563	915	860	754	985	10,979	10,324	9,050	11,820
KEY ENTRY OPERATORS I.....	59,947	840	790	700	912	10,080	9,480	8,400	10,949
KEY ENTRY OPERATORS II.....	40,768	981	940	813	1,086	11,772	11,285	9,750	13,035
MESSENGERS.....	17,342	712	660	600	752	8,543	7,925	7,203	9,020
PERSONNEL CLERKS I.....	1,829	805	765	700	865	9,656	9,177	8,397	10,376
PERSONNEL CLERKS II.....	4,507	973	912	810	1,065	11,673	10,949	9,720	12,780
PERSONNEL CLERKS III.....	3,401	1,078	1,046	930	1,182	12,942	12,555	11,158	14,184
PERSONNEL CLERKS IV.....	1,835	1,326	1,250	1,123	1,493	15,908	14,994	13,476	17,910
PERSONNEL CLERKS V.....	564	1,663	1,530	1,374	1,994	19,960	18,360	16,490	23,923
SECRETARIES I.....	38,984	946	925	826	1,045	11,354	11,100	9,907	12,540
SECRETARIES II.....	76,236	1,051	1,017	891	1,185	12,610	12,201	10,692	14,220
SECRETARIES III.....	84,763	1,171	1,134	982	1,312	14,052	13,608	11,784	15,740
SECRETARIES IV.....	47,245	1,291	1,250	1,079	1,474	15,490	15,000	12,949	17,688
SECRETARIES V.....	15,315	1,437	1,408	1,190	1,650	17,250	16,893	14,280	19,800
STENOGRAPHERS, GENERAL.....	18,761	987	920	785	1,149	11,849	11,040	9,420	13,786
STENOGRAPHERS, SENIOR.....	18,422	1,159	1,155	967	1,316	13,910	13,856	11,609	15,788
TYPISTS I.....	40,111	763	717	648	817	9,161	8,603	7,777	9,802
TYPISTS II.....	25,972	919	865	750	1,022	11,025	10,376	8,994	12,270

<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 1980)

OCCUPATION AND LEVEL <sup>3</sup> /	NUMBER OF EMPLOYEE <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>ACCOUNTANTS AND AUDITORS</b>							
ACCOUNTANTS I.....	3,051	\$1,371	\$1,333	\$1,212	\$1,529	25	109
ACCOUNTANTS II.....	7,459	1,708	1,675	1,456	1,973	38	111
ACCOUNTANTS III.....	9,266	1,918	1,890	1,658	2,185	28	108
ACCOUNTANTS IV.....	6,296	2,284	2,252	2,018	2,540	31	105
ACCOUNTANTS V.....	3,045	2,733	2,716	2,435	3,000	41	103
ACCOUNTANTS VI.....	604	3,406	3,357	3,020	3,773	55	101
AUDITORS I.....	554	1,280	1,271	1,132	1,374	31	103
AUDITORS II.....	1,363	1,589	1,547	1,380	1,774	39	106
AUDITORS III.....	1,735	1,925	1,891	1,666	2,179	39	105
AUDITORS IV.....	1,145	2,319	2,305	2,026	2,582	37	104
CHIEF ACCOUNTANTS III.....	99	3,300	3,240	2,916	3,600	15	96
CHIEF ACCOUNTANTS IV.....	63	4,105	4,127	3,750	4,479	63	98
<b>ATTORNEYS</b>							
ATTORNEYS I.....	355	1,941	1,950	1,691	2,167	22	111
ATTORNEYS II.....	667	2,281	2,258	2,015	2,517	24	107
ATTORNEYS III.....	890	2,888	2,871	2,562	3,149	28	105
ATTORNEYS IV.....	923	3,463	3,340	3,042	3,798	34	102
ATTORNEYS V.....	681	4,275	4,170	3,798	4,681	38	103
ATTORNEYS VI.....	341	5,184	5,026	4,513	5,800	55	103
<b>BUYERS</b>							
BUYERS I.....	1,014	1,410	1,347	1,187	1,560	16	114
BUYERS II.....	4,576	1,673	1,625	1,458	1,826	25	109
BUYERS III.....	5,947	2,022	1,974	1,752	2,222	36	106
BUYERS IV.....	2,778	2,397	2,325	2,049	2,721	54	104
<b>PERSONNEL MANAGEMENT</b>							
JOB ANALYSTS II.....	209	1,497	1,458	1,325	1,649	48	107
JOB ANALYSTS III.....	318	1,872	1,808	1,600	2,064	49	105
JOB ANALYSTS IV.....	332	2,235	2,224	1,947	2,499	61	102
DIRECTORS OF PERSONNEL II.....	108	2,797	2,800	2,500	3,066	7	105
DIRECTORS OF PERSONNEL III.....	128	3,462	3,511	3,124	3,752	14	110
DIRECTORS OF PERSONNEL IV.....	169	4,465	4,575	4,050	4,970	52	108
<b>CHEMISTS AND ENGINEERS</b>							
CHEMISTS I.....	665	1,507	1,482	1,364	1,638	24	112
CHEMISTS II.....	1,838	1,777	1,734	1,545	1,965	35	109
CHEMISTS III.....	3,264	2,120	2,101	1,850	2,365	32	109
CHEMISTS IV.....	4,112	2,452	2,405	2,195	2,658	39	106
CHEMISTS V.....	3,772	2,962	2,916	2,625	3,265	46	105
CHEMISTS VI.....	2,174	3,407	3,325	2,952	3,800	48	107
ENGINEERS I.....	9,919	1,672	1,664	1,565	1,774	48	103
ENGINEERS II.....	18,040	1,828	1,800	1,672	1,952	43	103
ENGINEERS III.....	43,602	2,071	2,038	1,855	2,262	46	103
ENGINEERS IV.....	65,552	2,422	2,401	2,185	2,656	53	102
ENGINEERS V.....	52,774	2,797	2,774	2,535	3,046	57	101
ENGINEERS VI.....	25,599	3,237	3,204	2,957	3,474	60	102
ENGINEERS VII.....	9,436	3,663	3,624	3,325	3,957	66	102
ENGINEERS VIII.....	2,062	4,255	4,165	3,902	4,500	68	102

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 1980)

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 RANGES/ <sup>6</sup>		EMPLOYMENT	MEAN SALARIES
				FIRST QUARTILE	THIRD QUARTILE		
<b>TECHNICAL SUPPORT</b>							
ENGINEERING TECHNICIANS I.....	2,093	\$1,090	\$1,034	\$925	\$1,194	44	107
ENGINEERING TECHNICIANS II.....	7,094	1,248	1,200	1,104	1,365	41	105
ENGINEERING TECHNICIANS III.....	13,292	1,437	1,410	1,260	1,607	45	103
ENGINEERING TECHNICIANS IV.....	18,716	1,659	1,650	1,494	1,820	55	102
ENGINEERING TECHNICIANS V.....	13,956	1,876	1,860	1,699	2,041	77	101
DRAFTERS II.....	2,741	1,115	1,095	960	1,235	23	114
DRAFTERS III.....	6,407	1,314	1,260	1,120	1,489	28	110
DRAFTERS IV.....	8,424	1,545	1,504	1,356	1,716	32	108
DRAFTERS V.....	9,571	1,926	1,863	1,646	2,149	47	107
COMPUTER OPERATORS I.....	1,709	936	904	795	1,052	25	111
COMPUTER OPERATORS II.....	1,802	1,171	1,233	1,052	1,246	29	117
COMPUTER OPERATORS III.....	7,205	1,236	1,187	1,034	1,372	24	114
COMPUTER OPERATORS IV.....	5,908	1,481	1,435	1,260	1,684	36	111
COMPUTER OPERATORS V.....	1,895	1,662	1,634	1,416	1,816	51	108
COMPUTER OPERATORS VI.....	336	1,670	1,656	1,545	1,787	46	103
<b>CLERICAL</b>							
ACCOUNTING CLERKS I.....	5,773	865	812	704	946	18	118
ACCOUNTING CLERKS II.....	15,575	1,024	965	815	1,204	18	118
ACCOUNTING CLERKS III.....	15,881	1,171	1,172	968	1,304	25	114
ACCOUNTING CLERKS IV.....	8,462	1,436	1,407	1,238	1,642	39	112
FILE CLERKS I.....	2,834	703	639	582	730	10	107
FILE CLERKS II.....	2,808	872	770	673	1,074	19	119
FILE CLERKS III.....	1,339	1,007	950	817	1,117	33	110
KEY ENTRY OPERATORS I.....	12,484	997	916	782	1,166	19	120
KEY ENTRY OPERATORS II.....	12,002	1,098	1,032	878	1,265	27	112
MESSENGERS.....	4,762	788	721	639	865	26	111
PERSONNEL CLERKS I.....	262	896	839	750	1,013	12	112
PERSONNEL CLERKS II.....	1,291	1,105	1,065	883	1,304	24	115
PERSONNEL CLERKS III.....	858	1,177	1,151	973	1,356	22	110
PERSONNEL CLERKS IV.....	497	1,587	1,611	1,349	1,837	26	121
SECRETARIES I.....	12,096	1,014	995	886	1,105	28	108
SECRETARIES II.....	30,504	1,120	1,091	955	1,261	37	107
SECRETARIES III.....	33,235	1,281	1,243	1,076	1,465	37	110
SECRETARIES IV.....	18,388	1,428	1,413	1,216	1,614	37	111
SECRETARIES V.....	6,099	1,570	1,541	1,346	1,740	38	110
STENOGRAPHERS, GENERAL.....	9,444	1,032	985	819	1,195	45	104
STENOGRAPHERS, SENIOR.....	10,922	1,184	1,184	991	1,339	56	102
TYPISTS I.....	10,372	854	782	693	943	24	112
TYPISTS II.....	9,464	992	931	775	1,171	34	108

<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 1980)

MONTHLY SALARY	ACCOUNTANTS						AUDITORS			
	I	II	III	IV	V	VI	I	II	III	IV
UNDER \$900.....	1.0	-	-	-	-	-	-	-	-	-
\$900 AND UNDER \$925.....	1.5	-	-	-	-	-	-	-	-	-
\$925 AND UNDER \$950.....	.7	-	-	-	-	-	(1.2)	-	-	-
\$950 AND UNDER \$975.....	1.6	-	-	-	-	-	1.8	-	-	-
\$975 AND UNDER \$1,000.....	1.3	-	-	-	-	-	2.8	-	-	-
\$1,000 AND UNDER \$1,050.....	5.7	(1.8)	-	-	-	-	11.3	(0.7)	-	-
\$1,050 AND UNDER \$1,100.....	6.3	1.2	-	-	-	-	8.5	2.4	-	-
\$1,100 AND UNDER \$1,150.....	9.9	1.7	-	-	-	-	9.1	2.7	-	-
\$1,150 AND UNDER \$1,200.....	13.4	4.1	-	-	-	-	6.3	5.3	-	-
\$1,200 AND UNDER \$1,250.....	10.6	5.1	(1.2)	-	-	-	15.9	6.1	-	-
\$1,250 AND UNDER \$1,300.....	8.9	5.2	1.7	-	-	-	11.5	8.1	(1.6)	-
\$1,300 AND UNDER \$1,350.....	10.0	9.0	2.4	-	-	-	8.1	5.6	2.2	-
\$1,350 AND UNDER \$1,400.....	9.5	8.1	2.9	-	-	-	5.8	7.8	1.3	-
\$1,400 AND UNDER \$1,450.....	4.6	8.7	4.8	-	-	-	6.9	5.8	4.1	-
\$1,450 AND UNDER \$1,500.....	4.2	10.0	5.0	-	-	-	3.4	9.3	4.0	-
\$1,500 AND UNDER \$1,550.....	2.5	6.5	6.0	-	-	-	1.8	12.1	4.3	-
\$1,550 AND UNDER \$1,600.....	2.1	4.6	6.7	(2.4)	-	-	1.0	4.5	6.1	-
\$1,600 AND UNDER \$1,650.....	1.9	4.9	7.4	1.5	-	-	.9	4.1	4.4	(1.4)
\$1,650 AND UNDER \$1,700.....	1.4	4.3	7.3	2.4	-	-	2.1	5.0	6.2	1.8
\$1,700 AND UNDER \$1,750.....	1.1	3.5	7.4	2.3	-	-	(1.6)	3.4	7.9	2.5
\$1,750 AND UNDER \$1,800.....	(1.9)	2.6	5.7	2.7	-	-	-	3.5	7.1	2.7
\$1,800 AND UNDER \$1,850.....	-	3.1	5.7	3.2	-	-	-	4.2	8.9	2.5
\$1,850 AND UNDER \$1,900.....	-	2.3	4.8	4.5	-	-	-	1.9	3.9	4.2
\$1,900 AND UNDER \$1,950.....	-	1.9	4.9	4.9	-	-	-	1.3	3.2	4.5
\$1,950 AND UNDER \$2,000.....	-	2.0	3.5	6.2	(3.0)	-	-	.8	7.4	5.4
\$2,000 AND UNDER \$2,050.....	-	2.5	3.5	7.0	1.3	-	-	1.1	3.2	6.5
\$2,050 AND UNDER \$2,100.....	-	4.0	3.5	7.1	1.4	-	-	2.2	3.8	6.3
\$2,100 AND UNDER \$2,150.....	-	(3.2)	2.8	6.4	1.2	-	-	(2.2)	3.8	4.8
\$2,150 AND UNDER \$2,200.....	-	-	2.1	6.1	3.0	-	-	-	3.9	5.0
\$2,200 AND UNDER \$2,250.....	-	-	2.5	5.9	3.5	-	-	-	3.3	6.7
\$2,250 AND UNDER \$2,300.....	-	-	2.0	4.9	3.6	-	-	-	2.3	7.0
\$2,300 AND UNDER \$2,350.....	-	-	1.4	4.1	4.0	-	-	-	1.1	5.5
\$2,350 AND UNDER \$2,400.....	-	-	2.1	4.2	3.1	-	-	-	2.8	7.2
\$2,400 AND UNDER \$2,450.....	-	-	(2.6)	3.8	5.6	-	-	-	(3.1)	4.0
\$2,450 AND UNDER \$2,500.....	-	-	-	3.7	6.8	(2.2)	-	-	-	2.9
\$2,500 AND UNDER \$2,600.....	-	-	-	6.0	11.1	2.1	-	-	-	5.4
\$2,600 AND UNDER \$2,700.....	-	-	-	3.9	9.0	3.3	-	-	-	5.6
\$2,700 AND UNDER \$2,800.....	-	-	-	2.5	10.5	4.0	-	-	-	3.8
\$2,800 AND UNDER \$2,900.....	-	-	-	1.4	7.8	3.4	-	-	-	1.6
\$2,900 AND UNDER \$3,000.....	-	-	-	1.3	6.6	6.7	-	-	-	1.4
\$3,000 AND UNDER \$3,100.....	-	-	-	(1.6)	6.2	9.2	-	-	-	(1.6)
\$3,100 AND UNDER \$3,200.....	-	-	-	-	2.9	9.2	-	-	-	-
\$3,200 AND UNDER \$3,300.....	-	-	-	-	2.7	10.6	-	-	-	-
\$3,300 AND UNDER \$3,400.....	-	-	-	-	2.4	8.8	-	-	-	-
\$3,400 AND UNDER \$3,500.....	-	-	-	-	1.7	5.3	-	-	-	-
\$3,500 AND UNDER \$3,600.....	-	-	-	-	1.0	6.5	-	-	-	-
\$3,600 AND UNDER \$3,700.....	-	-	-	-	(1.5)	4.4	-	-	-	-
\$3,700 AND UNDER \$3,800.....	-	-	-	-	-	6.2	-	-	-	-
\$3,800 AND UNDER \$3,900.....	-	-	-	-	-	6.5	-	-	-	-
\$3,900 AND UNDER \$4,000.....	-	-	-	-	-	1.8	-	-	-	-
\$4,000 AND UNDER \$4,100.....	-	-	-	-	-	3.5	-	-	-	-
\$4,100 AND UNDER \$4,200.....	-	-	-	-	-	1.2	-	-	-	-
\$4,200 AND UNDER \$4,300.....	-	-	-	-	-	.5	-	-	-	-
\$4,300 AND UNDER \$4,400.....	-	-	-	-	-	.6	-	-	-	-
\$4,400 AND UNDER \$4,500.....	-	-	-	-	-	1.0	-	-	-	-
\$4,500 AND UNDER \$4,600.....	-	-	-	-	-	1.5	-	-	-	-
\$4,700 AND OVER.....	-	-	-	-	-	1.5	-	-	-	-
TOTAL .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	12,142	19,560	32,903	20,312	7,452	1,100	1,770	3,521	4,437	3,076
AVERAGE MONTHLY SALARY.....	\$1,262	\$1,536	\$1,775	\$2,180	\$2,661	\$3,358	\$1,238	\$1,500	\$1,836	\$2,232

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 1980)

MONTHLY SALARY	PUBLIC ACCOUNTANTS				CHIEF ACCOUNTANTS			
	I	II	III	IV	I	II	III	IV
UNDER \$1,000.....	1.6	-	-	-	-	-	-	-
\$1,000 AND UNDER \$1,050.....	1.0	-	-	-	-	-	-	-
\$1,050 AND UNDER \$1,100.....	2.8	-	-	-	-	-	-	-
\$1,100 AND UNDER \$1,150.....	5.2	(0.7)	-	-	-	-	-	-
\$1,150 AND UNDER \$1,200.....	10.9	1.7	-	-	-	-	-	-
\$1,200 AND UNDER \$1,250.....	37.4	5.8	-	-	-	-	-	-
\$1,250 AND UNDER \$1,300.....	16.6	15.3	-	-	-	-	-	-
\$1,300 AND UNDER \$1,350.....	12.8	20.0	1.6	-	-	-	-	-
\$1,350 AND UNDER \$1,400.....	5.8	18.5	6.3	-	-	-	-	-
\$1,400 AND UNDER \$1,450.....	3.4	11.2	5.0	-	-	-	-	-
\$1,450 AND UNDER \$1,500.....	1.8	9.6	11.5	1.0	-	-	-	-
\$1,500 AND UNDER \$1,550.....	(.7)	6.1	12.5	2.4	-	-	-	-
\$1,550 AND UNDER \$1,600.....	-	4.2	8.8	3.3	-	-	-	-
\$1,600 AND UNDER \$1,650.....	-	2.9	11.3	5.5	-	-	-	-
\$1,650 AND UNDER \$1,700.....	-	1.8	7.5	2.4	-	-	-	-
\$1,700 AND UNDER \$1,750.....	-	1.2	9.5	4.4	-	-	-	-
\$1,750 AND UNDER \$1,800.....	-	(1.0)	4.7	9.6	-	-	-	-
\$1,800 AND UNDER \$1,850.....	-	-	5.7	7.9	6.8	1.0	-	-
\$1,850 AND UNDER \$1,900.....	-	-	3.6	6.7	3.2	-	-	-
\$1,900 AND UNDER \$1,950.....	-	-	3.4	8.0	-	1.6	-	-
\$1,950 AND UNDER \$2,000.....	-	-	3.2	8.1	3.2	3.1	-	-
\$2,000 AND UNDER \$2,050.....	-	-	1.9	6.4	-	-	-	-
\$2,050 AND UNDER \$2,100.....	-	-	1.2	4.9	2.3	2.9	-	-
\$2,100 AND UNDER \$2,150.....	-	-	(2.5)	4.7	-	-	-	-
\$2,150 AND UNDER \$2,200.....	-	-	-	3.5	4.7	1.6	-	-
\$2,200 AND UNDER \$2,250.....	-	-	-	2.7	9.7	1.5	-	-
\$2,250 AND UNDER \$2,300.....	-	-	-	2.9	6.3	1.1	-	-
\$2,300 AND UNDER \$2,350.....	-	-	-	3.1	4.3	4.6	-	-
\$2,350 AND UNDER \$2,400.....	-	-	-	.8	3.0	2.8	-	-
\$2,400 AND UNDER \$2,450.....	-	-	-	3.4	11.8	1.9	-	-
\$2,450 AND UNDER \$2,500.....	-	-	-	2.8	18.4	2.1	(1.7)	-
\$2,500 AND UNDER \$2,600.....	-	-	-	.9	15.6	11.0	2.3	-
\$2,600 AND UNDER \$2,700.....	-	-	-	2.1	2.7	5.2	.3	-
\$2,700 AND UNDER \$2,800.....	-	-	-	1.5	-	10.8	2.9	-
\$2,800 AND UNDER \$2,900.....	-	-	-	(1.0)	6.4	16.8	7.3	1.0
\$2,900 AND UNDER \$3,000.....	-	-	-	-	-	14.6	3.8	-
\$3,000 AND UNDER \$3,100.....	-	-	-	-	-	8.3	6.1	1.0
\$3,100 AND UNDER \$3,200.....	-	-	-	-	1.6	.4	6.7	-
\$3,200 AND UNDER \$3,300.....	-	-	-	-	-	1.9	17.5	1.0
\$3,300 AND UNDER \$3,400.....	-	-	-	-	-	1.9	7.5	1.0
\$3,400 AND UNDER \$3,500.....	-	-	-	-	-	2.6	8.8	1.0
\$3,500 AND UNDER \$3,600.....	-	-	-	-	-	1.0	4.7	3.0
\$3,600 AND UNDER \$3,700.....	-	-	-	-	-	-	5.6	7.0
\$3,700 AND UNDER \$3,800.....	-	-	-	-	-	-	1.7	12.0
\$3,800 AND UNDER \$3,900.....	-	-	-	-	-	-	2.3	11.0
\$3,900 AND UNDER \$4,000.....	-	-	-	-	-	1.2	1.1	8.0
\$4,000 AND UNDER \$4,100.....	-	-	-	-	-	-	7.9	4.0
\$4,100 AND UNDER \$4,200.....	-	-	-	-	-	-	1.5	5.0
\$4,200 AND UNDER \$4,300.....	-	-	-	-	-	-	3.4	2.0
\$4,300 AND UNDER \$4,400.....	-	-	-	-	-	-	.5	2.0
\$4,400 AND UNDER \$4,500.....	-	-	-	-	-	-	.2	8.0
\$4,500 AND UNDER \$4,600.....	-	-	-	-	-	-	5.9	3.0
\$4,600 AND UNDER \$4,700.....	-	-	-	-	-	-	(.3)	17.0
\$4,700 AND UNDER \$4,800.....	-	-	-	-	-	-	-	2.0
\$4,800 AND UNDER \$4,900.....	-	-	-	-	-	-	-	5.0
\$4,900 AND UNDER \$5,000.....	-	-	-	-	-	-	-	1.0
\$5,000 AND UNDER \$5,100.....	-	-	-	-	-	-	-	5.0
<b>TOTAL</b> .....	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>NUMBER OF EMPLOYEES</b> .....	<b>7,960</b>	<b>7,649</b>	<b>6,799</b>	<b>2,972</b>	<b>559</b>	<b>891</b>	<b>656</b>	<b>100</b>
<b>AVERAGE MONTHLY SALARY</b> .....	<b>\$1,247</b>	<b>\$1,391</b>	<b>\$1,650</b>	<b>\$1,992</b>	<b>\$2,362</b>	<b>\$2,722</b>	<b>\$3,424</b>	<b>\$4,173</b>

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, March 1980)

MONTHLY SALARY	ATTORNEYS					
	I	II	III	IV	V	VI
UNDER \$1,100.....	0.1	-	-	-	-	-
\$1,100 AND UNDER \$1,150.....	1.2	-	-	-	-	-
\$1,150 AND UNDER \$1,200.....	.1	-	-	-	-	-
\$1,200 AND UNDER \$1,250.....	2.7	-	-	-	-	-
\$1,250 AND UNDER \$1,300.....	1.2	(0.3)	-	-	-	-
\$1,300 AND UNDER \$1,350.....	5.3	1.3	-	-	-	-
\$1,350 AND UNDER \$1,400.....	2.7	-	-	-	-	-
\$1,400 AND UNDER \$1,450.....	10.4	1.3	-	-	-	-
\$1,450 AND UNDER \$1,500.....	6.5	.5	-	-	-	-
\$1,500 AND UNDER \$1,550.....	8.8	1.9	-	-	-	-
\$1,550 AND UNDER \$1,600.....	1.2	1.2	-	-	-	-
\$1,600 AND UNDER \$1,650.....	2.6	2.3	-	-	-	-
\$1,650 AND UNDER \$1,700.....	6.0	3.5	-	-	-	-
\$1,700 AND UNDER \$1,750.....	4.5	2.6	-	-	-	-
\$1,750 AND UNDER \$1,800.....	2.8	2.4	-	-	-	-
\$1,800 AND UNDER \$1,850.....	8.8	6.2	(0.7)	-	-	-
\$1,850 AND UNDER \$1,900.....	2.5	1.3	1.2	-	-	-
\$1,900 AND UNDER \$1,950.....	4.0	4.8	.5	-	-	-
\$1,950 AND UNDER \$2,000.....	1.6	4.1	.3	-	-	-
\$2,000 AND UNDER \$2,050.....	7.2	6.4	.9	-	-	-
\$2,050 AND UNDER \$2,100.....	2.9	6.7	.8	-	-	-
\$2,100 AND UNDER \$2,150.....	.8	7.7	.5	-	-	-
\$2,150 AND UNDER \$2,200.....	7.7	5.7	2.2	-	-	-
\$2,200 AND UNDER \$2,250.....	2.1	6.0	3.4	-	-	-
\$2,250 AND UNDER \$2,300.....	1.5	5.2	-	-	-	-
\$2,300 AND UNDER \$2,350.....	1.0	3.1	4.2	-	-	-
\$2,350 AND UNDER \$2,400.....	1.2	3.6	3.9	-	-	-
\$2,400 AND UNDER \$2,450.....	.7	2.2	2.6	-	-	-
\$2,450 AND UNDER \$2,500.....	.6	3.8	7.6	(1.4)	-	-
\$2,500 AND UNDER \$2,600.....	1.0	6.7	9.1	2.8	-	-
\$2,600 AND UNDER \$2,700.....	(.4)	3.6	7.8	2.4	-	-
\$2,700 AND UNDER \$2,800.....	-	1.4	8.9	4.8	(0.2)	-
\$2,800 AND UNDER \$2,900.....	-	2.4	7.7	6.9	4.1	-
\$2,900 AND UNDER \$3,000.....	-	(1.5)	6.6	6.5	.6	-
\$3,000 AND UNDER \$3,100.....	-	-	5.9	5.5	1.8	-
\$3,100 AND UNDER \$3,200.....	-	-	6.1	10.5	4.2	-
\$3,200 AND UNDER \$3,300.....	-	-	4.5	8.1	1.4	-
\$3,300 AND UNDER \$3,400.....	-	-	3.1	5.8	3.9	(0.6)
\$3,400 AND UNDER \$3,500.....	-	-	1.7	4.1	4.2	1.0
\$3,500 AND UNDER \$3,600.....	-	-	3.0	5.3	5.3	1.1
\$3,600 AND UNDER \$3,700.....	-	-	1.3	6.8	4.8	1.0
\$3,700 AND UNDER \$3,800.....	-	-	(2.3)	5.7	3.3	1.9
\$3,800 AND UNDER \$3,900.....	-	-	-	3.9	6.6	.8
\$3,900 AND UNDER \$4,000.....	-	-	-	6.2	3.7	1.3
\$4,000 AND UNDER \$4,100.....	-	-	-	4.8	5.7	2.4
\$4,100 AND UNDER \$4,200.....	-	-	-	1.4	4.7	5.3
\$4,200 AND UNDER \$4,300.....	-	-	-	1.2	6.0	5.5
\$4,300 AND UNDER \$4,400.....	-	-	-	1.3	3.0	2.6
\$4,400 AND UNDER \$4,500.....	-	-	-	1.1	4.7	4.3
\$4,500 AND UNDER \$4,600.....	-	-	-	1.2	4.4	9.5
\$4,600 AND UNDER \$4,700.....	-	-	-	(2.3)	5.3	5.5
\$4,700 AND UNDER \$4,800.....	-	-	-	-	2.4	6.4
\$4,800 AND UNDER \$4,900.....	-	-	-	-	3.5	2.7
\$4,900 AND UNDER \$5,000.....	-	-	-	-	2.7	3.7
\$5,000 AND UNDER \$5,100.....	-	-	-	-	2.8	3.7
\$5,100 AND UNDER \$5,200.....	-	-	-	-	1.2	1.8
\$5,200 AND UNDER \$5,300.....	-	-	-	-	1.7	4.0
\$5,300 AND UNDER \$5,400.....	-	-	-	-	1.3	2.6
\$5,400 AND UNDER \$5,500.....	-	-	-	-	2.7	2.4
\$5,500 AND UNDER \$5,600.....	-	-	-	-	.8	2.7
\$5,600 AND UNDER \$5,700.....	-	-	-	-	1.2	1.3
\$5,700 AND UNDER \$5,800.....	-	-	-	-	-	5.3
\$5,800 AND UNDER \$5,900.....	-	-	-	-	(2.2)	1.9
\$5,900 AND UNDER \$6,000.....	-	-	-	-	-	1.1
\$6,000 AND UNDER \$6,100.....	-	-	-	-	-	5.1
\$6,100 AND UNDER \$6,200.....	-	-	-	-	-	1.0
\$6,200 AND UNDER \$6,300.....	-	-	-	-	-	2.1
\$6,300 AND UNDER \$6,400.....	-	-	-	-	-	1.1
\$6,400 AND UNDER \$6,500.....	-	-	-	-	-	1.4
\$6,500 AND UNDER \$6,600.....	-	-	-	-	-	.5
\$6,600 AND UNDER \$6,700.....	-	-	-	-	-	.6
\$6,700 AND UNDER \$6,800.....	-	-	-	-	-	.8
\$6,800 AND UNDER \$6,900.....	-	-	-	-	-	.3
\$6,900 AND UNDER \$7,000.....	-	-	-	-	-	.8
\$7,000 AND UNDER \$7,100.....	-	-	-	-	-	1.4
\$7,100 AND UNDER \$7,200.....	-	-	-	-	-	.3
\$7,300 AND UNDER \$7,400.....	-	-	-	-	-	1.1
\$7,400 AND OVER.....	-	-	-	-	-	.8
TOTAL .....	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	1,629	2,776	3,174	2,753	1,802	622
AVERAGE MONTHLY SALARY.....	\$1,743	\$2,129	\$2,753	\$3,405	\$4,155	\$5,053

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 1980)

MONTHLY SALARY	BUYERS			
	I	II	III	IV
UNDER \$900.....	2.4	-	-	-
\$900 AND UNDER \$925.....	1.1	-	-	-
\$925 AND UNDER \$950.....	2.5	-	-	-
\$950 AND UNDER \$975.....	1.7	-	-	-
\$975 AND UNDER \$1,000.....	3.5	-	-	-
\$1,000 AND UNDER \$1,050.....	7.6	(2.0)	-	-
\$1,050 AND UNDER \$1,100.....	9.7	1.4	-	-
\$1,100 AND UNDER \$1,150.....	12.6	1.8	-	-
\$1,150 AND UNDER \$1,200.....	7.7	3.1	-	-
\$1,200 AND UNDER \$1,250.....	11.4	3.4	-	-
\$1,250 AND UNDER \$1,300.....	4.8	4.8	(0.7)	-
\$1,300 AND UNDER \$1,350.....	9.9	7.0	1.4	-
\$1,350 AND UNDER \$1,400.....	5.4	6.8	1.2	-
\$1,400 AND UNDER \$1,450.....	3.5	8.0	1.8	-
\$1,450 AND UNDER \$1,500.....	4.3	8.1	2.0	-
\$1,500 AND UNDER \$1,550.....	2.4	10.2	3.4	-
\$1,550 AND UNDER \$1,600.....	2.1	6.0	5.5	(1.8)
\$1,600 AND UNDER \$1,650.....	1.4	8.1	5.4	2.3
\$1,650 AND UNDER \$1,700.....	1.6	6.8	6.2	1.8
\$1,700 AND UNDER \$1,750.....	1.7	4.6	6.5	1.3
\$1,750 AND UNDER \$1,800.....	(2.7)	3.4	6.5	1.4
\$1,800 AND UNDER \$1,850.....	-	3.4	7.0	3.4
\$1,850 AND UNDER \$1,900.....	-	2.0	5.7	2.0
\$1,900 AND UNDER \$1,950.....	-	1.7	5.9	4.6
\$1,950 AND UNDER \$2,000.....	-	1.7	6.7	3.9
\$2,000 AND UNDER \$2,050.....	-	1.0	5.4	4.9
\$2,050 AND UNDER \$2,100.....	-	1.0	5.0	5.6
\$2,100 AND UNDER \$2,150.....	-	(3.8)	3.7	4.5
\$2,150 AND UNDER \$2,200.....	-	-	3.5	6.5
\$2,200 AND UNDER \$2,250.....	-	-	3.4	5.9
\$2,250 AND UNDER \$2,300.....	-	-	1.8	3.2
\$2,300 AND UNDER \$2,350.....	-	-	1.5	5.7
\$2,350 AND UNDER \$2,400.....	-	-	1.1	3.6
\$2,400 AND UNDER \$2,450.....	-	-	1.7	4.4
\$2,450 AND UNDER \$2,500.....	-	-	1.2	4.1
\$2,500 AND UNDER \$2,600.....	-	-	1.8	4.9
\$2,600 AND UNDER \$2,700.....	-	-	1.3	4.9
\$2,700 AND UNDER \$2,800.....	-	-	(2.4)	6.8
\$2,800 AND UNDER \$2,900.....	-	-	-	3.4
\$2,900 AND UNDER \$3,000.....	-	-	-	3.0
\$3,000 AND UNDER \$3,100.....	-	-	-	1.9
\$3,100 AND UNDER \$3,200.....	-	-	-	1.2
\$3,200 AND OVER.....	-	-	-	(2.8)
TOTAL .....	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	6,520	18,432	16,479	5,187
AVERAGE MONTHLY SALARY.....	\$1,238	\$1,539	\$1,909	\$2,315

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 1980)

MONTHLY SALARY	JOB ANALYSTS				DIRECTORS OF PERSONNEL			
	I	II	III	IV	I	II	III	IV
\$875 AND UNDER \$900.....	1.5	-	-	-	-	-	-	-
\$900 AND UNDER \$925.....	-	-	-	-	-	-	-	-
\$925 AND UNDER \$950.....	.8	1.1	-	-	-	-	-	-
\$950 AND UNDER \$975.....	4.6	-	-	-	-	-	-	-
\$975 AND UNDER \$1,000.....	-	-	-	-	-	-	-	-
\$1,000 AND UNDER \$1,050.....	10.8	1.4	-	-	-	-	-	-
\$1,050 AND UNDER \$1,100.....	6.2	4.8	-	-	-	-	-	-
\$1,100 AND UNDER \$1,150.....	8.5	4.1	-	-	-	-	-	-
\$1,150 AND UNDER \$1,200.....	11.5	13.1	-	-	-	-	-	-
\$1,200 AND UNDER \$1,250.....	3.1	7.3	-	-	-	-	-	-
\$1,250 AND UNDER \$1,300.....	7.7	11.9	(1.4)	-	-	-	-	-
\$1,300 AND UNDER \$1,350.....	4.6	6.9	2.0	-	-	-	-	-
\$1,350 AND UNDER \$1,400.....	9.2	6.2	3.2	-	-	-	-	-
\$1,400 AND UNDER \$1,450.....	.8	3.7	3.2	-	6.0	-	-	-
\$1,450 AND UNDER \$1,500.....	.8	8.7	4.6	-	-	-	-	-
\$1,500 AND UNDER \$1,550.....	8.5	5.0	6.6	(0.4)	3.5	-	-	-
\$1,550 AND UNDER \$1,600.....	.8	6.9	6.9	2.7	.3	-	-	-
\$1,600 AND UNDER \$1,650.....	2.3	3.0	9.0	2.2	3.1	-	-	-
\$1,650 AND UNDER \$1,700.....	4.6	1.8	11.3	4.2	3.2	-	-	-
\$1,700 AND UNDER \$1,750.....	1.5	5.0	5.9	2.9	4.1	-	-	-
\$1,750 AND UNDER \$1,800.....	.8	1.1	3.7	1.8	2.2	-	-	-
\$1,800 AND UNDER \$1,850.....	1.5	3.2	6.0	6.8	13.3	2.1	-	-
\$1,850 AND UNDER \$1,900.....	2.3	.7	6.6	2.7	5.3	-	-	-
\$1,900 AND UNDER \$1,950.....	2.3	.9	10.6	6.4	6.2	.3	-	-
\$1,950 AND UNDER \$2,000.....	1.5	1.1	2.3	2.6	3.5	2.4	-	-
\$2,000 AND UNDER \$2,050.....	3.1	-	1.1	3.3	1.4	.1	-	-
\$2,050 AND UNDER \$2,100.....	(.8)	-	1.9	3.8	7.7	4.3	-	-
\$2,100 AND UNDER \$2,150.....	-	-	.8	5.5	4.7	2.7	-	-
\$2,150 AND UNDER \$2,200.....	-	.5	.6	8.2	2.2	3.2	-	-
\$2,200 AND UNDER \$2,250.....	-	-	.8	4.6	6.2	4.2	0.7	-
\$2,250 AND UNDER \$2,300.....	-	1.1	1.1	2.6	6.1	3.8	3.1	-
\$2,300 AND UNDER \$2,350.....	-	(.2)	.5	5.3	4.1	7.5	-	-
\$2,350 AND UNDER \$2,400.....	-	-	.8	2.2	1.2	3.2	.5	-
\$2,400 AND UNDER \$2,450.....	-	-	2.3	3.3	3.7	4.2	-	-
\$2,450 AND UNDER \$2,500.....	-	-	3.5	9.7	-	8.2	4.9	-
\$2,500 AND UNDER \$2,600.....	-	-	1.4	6.2	2.4	3.8	6.8	-
\$2,600 AND UNDER \$2,700.....	-	-	1.2	5.5	3.0	7.2	5.2	-
\$2,700 AND UNDER \$2,800.....	-	-	(.6)	1.6	.3	6.1	6.6	-
\$2,800 AND UNDER \$2,900.....	-	-	-	1.8	2.2	3.0	3.4	-
\$2,900 AND UNDER \$3,000.....	-	-	-	.9	-	9.9	8.9	3.7
\$3,000 AND UNDER \$3,100.....	-	-	-	1.1	.2	8.4	8.5	4.3
\$3,100 AND UNDER \$3,200.....	-	-	-	(1.5)	2.4	3.5	8.5	2.5
\$3,200 AND UNDER \$3,300.....	-	-	-	-	(1.5)	3.4	4.0	.6
\$3,300 AND UNDER \$3,400.....	-	-	-	-	-	3.3	7.3	2.8
\$3,400 AND UNDER \$3,500.....	-	-	-	-	-	2.1	4.8	2.8
\$3,500 AND UNDER \$3,600.....	-	-	-	-	-	.9	10.2	3.4
\$3,600 AND UNDER \$3,700.....	-	-	-	-	-	.2	4.0	6.4
\$3,700 AND UNDER \$3,800.....	-	-	-	-	-	1.0	2.6	8.9
\$3,800 AND UNDER \$3,900.....	-	-	-	-	-	(.8)	1.0	1.8
\$3,900 AND UNDER \$4,000.....	-	-	-	-	-	-	4.2	2.5
\$4,000 AND UNDER \$4,100.....	-	-	-	-	-	-	.7	10.4
\$4,100 AND UNDER \$4,200.....	-	-	-	-	-	-	.3	8.9
\$4,200 AND UNDER \$4,300.....	-	-	-	-	-	-	2.2	2.1
\$4,300 AND UNDER \$4,400.....	-	-	-	-	-	-	1.2	6.4
\$4,400 AND UNDER \$4,500.....	-	-	-	-	-	-	(.4)	1.8
\$4,500 AND UNDER \$4,600.....	-	-	-	-	-	-	-	2.8
\$4,600 AND UNDER \$4,700.....	-	-	-	-	-	-	-	3.7
\$4,700 AND UNDER \$4,800.....	-	-	-	-	-	-	-	3.1
\$4,800 AND UNDER \$4,900.....	-	-	-	-	-	-	-	4.0
\$4,900 AND UNDER \$5,000.....	-	-	-	-	-	-	-	3.7
\$5,000 AND UNDER \$5,100.....	-	-	-	-	-	-	-	3.7
\$5,100 AND UNDER \$5,200.....	-	-	-	-	-	-	-	2.1
\$5,200 AND UNDER \$5,300.....	-	-	-	-	-	-	-	3.1
\$5,300 AND UNDER \$5,400.....	-	-	-	-	-	-	-	2.1
\$5,400 AND UNDER \$5,500.....	-	-	-	-	-	-	-	1.8
\$5,600 AND UNDER \$5,700.....	-	-	-	-	-	-	-	.6
TOTAL .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYERS.....	130	436	648	546	1,200	1,459	921	326
AVERAGE MONTHLY SALARY.....	\$1,338	\$1,400	\$1,790	\$2,193	\$2,060	\$2,653	\$3,151	\$4,144

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 1980)

MONTHLY SALARY	CHEMISTS						
	I	II	III	IV	V	VI	VII
UNDER \$1,050.....	0.6	-	-	-	-	-	-
\$1,050 AND UNDER \$1,100.....	5.2	-	-	-	-	-	-
\$1,100 AND UNDER \$1,150.....	8.2	-	-	-	-	-	-
\$1,150 AND UNDER \$1,200.....	6.3	(0.9)	-	-	-	-	-
\$1,200 AND UNDER \$1,250.....	9.3	3.7	-	-	-	-	-
\$1,250 AND UNDER \$1,300.....	14.2	3.6	(0.5)	-	-	-	-
\$1,300 AND UNDER \$1,350.....	11.5	5.0	1.0	-	-	-	-
\$1,350 AND UNDER \$1,400.....	12.0	6.3	1.4	-	-	-	-
\$1,400 AND UNDER \$1,450.....	6.4	6.8	2.4	-	-	-	-
\$1,450 AND UNDER \$1,500.....	9.0	10.8	2.4	-	-	-	-
\$1,500 AND UNDER \$1,550.....	4.5	8.2	2.6	-	-	-	-
\$1,550 AND UNDER \$1,600.....	2.8	6.9	3.4	-	-	-	-
\$1,600 AND UNDER \$1,650.....	2.5	7.7	3.1	(1.8)	-	-	-
\$1,650 AND UNDER \$1,700.....	2.3	5.7	6.0	1.6	-	-	-
\$1,700 AND UNDER \$1,750.....	2.0	5.5	5.5	1.5	-	-	-
\$1,750 AND UNDER \$1,800.....	1.5	6.2	6.1	1.4	-	-	-
\$1,800 AND UNDER \$1,850.....	(1.7)	3.3	6.6	2.5	-	-	-
\$1,850 AND UNDER \$1,900.....	-	3.3	5.8	2.7	-	-	-
\$1,900 AND UNDER \$1,950.....	-	2.8	6.6	2.5	-	-	-
\$1,950 AND UNDER \$2,000.....	-	2.1	5.9	2.9	-	-	-
\$2,000 AND UNDER \$2,050.....	-	2.6	5.1	6.0	(2.4)	-	-
\$2,050 AND UNDER \$2,100.....	-	1.5	5.0	5.0	1.4	-	-
\$2,100 AND UNDER \$2,150.....	-	1.4	6.4	6.2	1.2	-	-
\$2,150 AND UNDER \$2,200.....	-	-	3.8	6.3	1.0	-	-
\$2,200 AND UNDER \$2,250.....	-	.8	3.1	6.0	2.8	-	-
\$2,250 AND UNDER \$2,300.....	-	2.4	2.9	5.7	2.2	-	-
\$2,300 AND UNDER \$2,350.....	-	(1.6)	2.5	6.1	2.4	(2.9)	-
\$2,350 AND UNDER \$2,400.....	-	-	1.9	5.0	2.6	1.0	-
\$2,400 AND UNDER \$2,450.....	-	-	2.8	4.4	3.3	1.0	-
\$2,450 AND UNDER \$2,500.....	-	-	1.5	5.0	5.2	2.0	-
\$2,500 AND UNDER \$2,600.....	-	-	2.2	8.8	8.4	1.8	-
\$2,600 AND UNDER \$2,700.....	-	-	1.7	4.9	8.7	3.2	-
\$2,700 AND UNDER \$2,800.....	-	-	1.0	5.0	8.8	8.8	-
\$2,800 AND UNDER \$2,900.....	-	-	(.8)	3.2	9.1	7.5	(1.2)
\$2,900 AND UNDER \$3,000.....	-	-	-	1.6	9.2	16.3	2.9
\$3,000 AND UNDER \$3,100.....	-	-	-	1.4	8.1	7.5	.8
\$3,100 AND UNDER \$3,200.....	-	-	-	(2.3)	5.8	7.4	1.6
\$3,200 AND UNDER \$3,300.....	-	-	-	-	3.8	7.1	9.7
\$3,300 AND UNDER \$3,400.....	-	-	-	-	2.8	6.1	5.0
\$3,400 AND UNDER \$3,500.....	-	-	-	-	3.0	4.1	23.1
\$3,500 AND UNDER \$3,600.....	-	-	-	-	2.3	4.0	6.4
\$3,600 AND UNDER \$3,700.....	-	-	-	-	1.6	2.6	3.7
\$3,700 AND UNDER \$3,800.....	-	-	-	-	1.4	3.6	8.2
\$3,800 AND UNDER \$3,900.....	-	-	-	-	1.1	3.3	2.7
\$3,900 AND UNDER \$4,000.....	-	-	-	-	(1.2)	2.8	2.5
\$4,000 AND UNDER \$4,100.....	-	-	-	-	-	2.0	2.6
\$4,100 AND UNDER \$4,200.....	-	-	-	-	-	1.6	4.3
\$4,200 AND UNDER \$4,300.....	-	-	-	-	-	1.0	3.7
\$4,300 AND UNDER \$4,400.....	-	-	-	-	-	(2.6)	3.1
\$4,400 AND UNDER \$4,500.....	-	-	-	-	-	-	3.9
\$4,500 AND UNDER \$4,600.....	-	-	-	-	-	-	2.2
\$4,600 AND UNDER \$4,700.....	-	-	-	-	-	-	1.9
\$4,700 AND UNDER \$4,800.....	-	-	-	-	-	-	1.8
\$4,800 AND UNDER \$4,900.....	-	-	-	-	-	-	1.5
\$4,900 AND UNDER \$5,000.....	-	-	-	-	-	-	.8
\$5,000 AND UNDER \$5,100.....	-	-	-	-	-	-	1.2
\$5,100 AND UNDER \$5,200.....	-	-	-	-	-	-	.7
\$5,200 AND UNDER \$5,300.....	-	-	-	-	-	-	1.1
\$5,300 AND OVER.....	-	-	-	-	-	-	3.1
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	2,824	5,299	10,192	10,519	8,135	4,532	1,695
AVERAGE MONTHLY SALARY.....	\$1,350	\$1,631	\$1,948	\$2,307	\$2,816	\$3,178	\$3,824

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 1980)

MONTHLY SALARY	ENGINEERS							
	I	II	III	IV	V	VI	VII	VIII
UNDER \$1,200.....	1.5	-	-	-	-	-	-	-
\$1,200 AND UNDER \$1,250.....	1.9	-	-	-	-	-	-	-
\$1,250 AND UNDER \$1,300.....	1.4	-	-	-	-	-	-	-
\$1,300 AND UNDER \$1,350.....	2.4	(1.5)	-	-	-	-	-	-
\$1,350 AND UNDER \$1,400.....	3.5	1.2	-	-	-	-	-	-
\$1,400 AND UNDER \$1,450.....	6.2	2.2	-	-	-	-	-	-
\$1,450 AND UNDER \$1,500.....	7.4	3.1	(1.6)	-	-	-	-	-
\$1,500 AND UNDER \$1,550.....	9.8	6.0	1.3	-	-	-	-	-
\$1,550 AND UNDER \$1,600.....	10.4	6.6	1.9	-	-	-	-	-
\$1,600 AND UNDER \$1,650.....	11.5	8.8	2.7	-	-	-	-	-
\$1,650 AND UNDER \$1,700.....	11.7	10.6	3.5	-	-	-	-	-
\$1,700 AND UNDER \$1,750.....	8.9	9.8	5.1	-	-	-	-	-
\$1,750 AND UNDER \$1,800.....	6.6	8.8	6.4	(2.3)	-	-	-	-
\$1,800 AND UNDER \$1,850.....	6.7	8.4	7.4	1.4	-	-	-	-
\$1,850 AND UNDER \$1,900.....	4.4	6.7	7.2	1.7	-	-	-	-
\$1,900 AND UNDER \$1,950.....	2.6	6.1	7.6	2.6	-	-	-	-
\$1,950 AND UNDER \$2,000.....	1.4	5.1	7.4	3.3	-	-	-	-
\$2,000 AND UNDER \$2,050.....	(1.5)	3.9	6.9	3.9	-	-	-	-
\$2,050 AND UNDER \$2,100.....	-	3.3	6.2	4.9	(3.0)	-	-	-
\$2,100 AND UNDER \$2,150.....	-	2.4	5.9	5.5	1.0	-	-	-
\$2,150 AND UNDER \$2,200.....	-	1.5	4.8	5.8	1.4	-	-	-
\$2,200 AND UNDER \$2,250.....	-	1.2	4.4	6.4	1.9	-	-	-
\$2,250 AND UNDER \$2,300.....	-	(2.8)	3.9	5.9	2.2	-	-	-
\$2,300 AND UNDER \$2,350.....	-	-	3.1	6.2	3.1	-	-	-
\$2,350 AND UNDER \$2,400.....	-	-	2.7	5.6	3.2	-	-	-
\$2,400 AND UNDER \$2,450.....	-	-	2.8	5.5	3.9	(2.5)	-	-
\$2,450 AND UNDER \$2,500.....	-	-	2.4	5.2	1.4	-	-	-
\$2,500 AND UNDER \$2,600.....	-	-	2.3	9.3	10.4	2.4	(1.2)	-
\$2,600 AND UNDER \$2,700.....	-	-	1.4	7.7	11.2	3.8	1.1	-
\$2,700 AND UNDER \$2,800.....	-	-	(1.2)	5.9	10.5	6.4	2.1	-
\$2,800 AND UNDER \$2,900.....	-	-	-	4.7	9.5	7.5	2.1	-
\$2,900 AND UNDER \$3,000.....	-	-	-	3.7	8.7	10.1	4.2	-
\$3,000 AND UNDER \$3,100.....	-	-	-	1.1	7.1	9.7	4.0	(0.9)
\$3,100 AND UNDER \$3,200.....	-	-	-	(1.4)	5.8	10.3	5.1	1.5
\$3,200 AND UNDER \$3,300.....	-	-	-	-	4.0	9.5	7.7	2.1
\$3,300 AND UNDER \$3,400.....	-	-	-	-	3.4	8.5	7.1	2.3
\$3,400 AND UNDER \$3,500.....	-	-	-	-	1.8	7.1	7.8	2.9
\$3,500 AND UNDER \$3,600.....	-	-	-	-	1.0	5.8	7.9	3.4
\$3,600 AND UNDER \$3,700.....	-	-	-	-	(2.1)	4.5	9.6	4.2
\$3,700 AND UNDER \$3,800.....	-	-	-	-	-	3.3	7.7	5.1
\$3,800 AND UNDER \$3,900.....	-	-	-	-	-	2.3	6.6	7.6
\$3,900 AND UNDER \$4,000.....	-	-	-	-	-	1.5	5.8	9.1
\$4,000 AND UNDER \$4,100.....	-	-	-	-	-	1.4	5.2	12.4
\$4,100 AND UNDER \$4,200.....	-	-	-	-	-	(2.3)	3.8	7.5
\$4,200 AND UNDER \$4,300.....	-	-	-	-	-	-	2.9	6.0
\$4,300 AND UNDER \$4,400.....	-	-	-	-	-	-	2.1	6.5
\$4,400 AND UNDER \$4,500.....	-	-	-	-	-	-	1.5	5.3
\$4,500 AND UNDER \$4,600.....	-	-	-	-	-	-	1.3	5.7
\$4,600 AND UNDER \$4,700.....	-	-	-	-	-	-	(3.0)	3.3
\$4,700 AND UNDER \$4,800.....	-	-	-	-	-	-	-	2.1
\$4,800 AND UNDER \$4,900.....	-	-	-	-	-	-	-	2.1
\$4,900 AND UNDER \$5,000.....	-	-	-	-	-	-	-	1.8
\$5,000 AND UNDER \$5,100.....	-	-	-	-	-	-	-	1.4
\$5,100 AND UNDER \$5,200.....	-	-	-	-	-	-	-	2.1
\$5,200 AND OVER.....	-	-	-	-	-	-	-	4.4
TOTAL .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	20,813	41,742	95,382	123,829	92,315	42,719	14,297	3,027
AVERAGE MONTHLY SALARY.....	\$1,618	\$1,774	\$2,013	\$2,374	\$2,762	\$3,188	\$3,604	\$4,173

<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 1980)

MONTHLY SALARY	ENGINEERING TECHNICIANS					DRAFTERS				
	I	II	III	IV	V	I	II	III	IV	V
UNDER \$600.....	-	-	-	-	-	0.2	-	-	-	-
\$600 AND UNDER \$625.....	-	-	-	-	-	1.7	-	-	-	-
\$625 AND UNDER \$650.....	-	-	-	-	-	.7	-	-	-	-
\$650 AND UNDER \$675.....	-	-	-	-	-	2.7	(1.4)	-	-	-
\$675 AND UNDER \$700.....	-	-	-	-	-	4.5	2.1	-	-	-
\$700 AND UNDER \$725.....	(1.7)	-	-	-	-	6.7	1.2	-	-	-
\$725 AND UNDER \$750.....	2.6	-	-	-	-	7.0	3.3	-	-	-
\$750 AND UNDER \$775.....	1.0	(0.2)	-	-	-	9.8	2.6	-	-	-
\$775 AND UNDER \$800.....	5.6	1.4	-	-	-	13.6	3.6	-	-	-
\$800 AND UNDER \$825.....	2.6	.3	-	-	-	4.1	4.5	(2.1)	-	-
\$825 AND UNDER \$850.....	5.6	.5	-	-	-	4.7	6.0	1.0	-	-
\$850 AND UNDER \$875.....	5.8	1.4	-	-	-	10.7	6.4	1.6	-	-
\$875 AND UNDER \$900.....	4.8	1.3	-	-	-	3.7	6.0	1.4	-	-
\$900 AND UNDER \$925.....	6.1	2.0	-	-	-	4.6	5.7	1.7	-	-
\$925 AND UNDER \$950.....	4.0	1.8	-	-	-	4.3	6.1	2.6	-	-
\$950 AND UNDER \$975.....	6.5	3.3	(0.8)	-	-	5.0	5.1	3.8	(1.2)	-
\$975 AND UNDER \$1,000.....	9.1	3.0	1.1	-	-	4.7	5.6	3.6	1.0	-
\$1,000 AND UNDER \$1,050.....	10.8	9.8	1.4	-	-	4.0	9.6	10.9	2.6	-
\$1,050 AND UNDER \$1,100.....	6.9	11.1	2.9	-	-	1.6	7.3	9.4	2.8	-
\$1,100 AND UNDER \$1,150.....	6.5	12.5	6.2	(1.2)	-	2.1	5.3	11.5	4.1	-
\$1,150 AND UNDER \$1,200.....	5.0	11.2	7.6	1.2	-	.9	4.6	10.0	5.2	(1.4)
\$1,200 AND UNDER \$1,250.....	3.5	10.0	8.3	2.5	-	.3	4.5	7.6	7.3	1.0
\$1,250 AND UNDER \$1,300.....	2.4	7.3	8.8	2.5	-	.5	1.9	7.2	7.5	1.6
\$1,300 AND UNDER \$1,350.....	1.7	5.6	10.6	4.1	(0.9)	-	1.1	4.8	9.5	2.3
\$1,350 AND UNDER \$1,400.....	.9	3.4	9.3	5.1	1.1	.2	1.2	3.4	8.6	3.4
\$1,400 AND UNDER \$1,450.....	2.0	3.1	7.4	6.1	1.7	.4	(2.9)	4.0	7.9	3.5
\$1,450 AND UNDER \$1,500.....	1.2	2.9	6.5	7.8	2.7	-	-	3.3	7.2	5.7
\$1,500 AND UNDER \$1,550.....	.8	1.8	6.0	7.6	3.3	.2	-	1.6	5.6	5.3
\$1,550 AND UNDER \$1,600.....	1.0	1.3	4.7	9.4	5.0	1.2	-	1.6	6.3	6.2
\$1,600 AND UNDER \$1,650.....	1.0	1.0	3.5	8.3	5.8	-	-	1.0	4.7	6.2
\$1,650 AND UNDER \$1,700.....	(.9)	1.6	4.0	10.4	6.9	-	-	2.6	3.0	6.7
\$1,700 AND UNDER \$1,750.....	-	1.4	2.5	6.3	9.4	-	-	1.4	3.1	6.2
\$1,750 AND UNDER \$1,800.....	-	(.9)	2.4	4.8	6.8	-	-	(2.1)	2.2	5.2
\$1,800 AND UNDER \$1,850.....	-	-	2.0	4.3	7.8	-	-	-	3.1	5.4
\$1,850 AND UNDER \$1,900.....	-	-	1.5	4.2	8.0	-	-	-	2.4	5.2
\$1,900 AND UNDER \$1,950.....	-	-	(2.4)	4.2	6.7	-	-	-	1.4	4.8
\$1,950 AND UNDER \$2,000.....	-	-	-	2.9	6.0	-	-	-	(3.6)	4.9
\$2,000 AND UNDER \$2,050.....	-	-	-	2.7	6.0	-	-	-	-	4.0
\$2,050 AND UNDER \$2,100.....	-	-	-	1.3	3.9	-	-	-	-	2.5
\$2,100 AND UNDER \$2,150.....	-	-	-	1.0	4.2	-	-	-	-	2.1
\$2,150 AND UNDER \$2,200.....	-	-	-	1.0	3.2	-	-	-	-	1.9
\$2,200 AND UNDER \$2,250.....	-	-	-	(1.1)	2.8	-	-	-	-	1.4
\$2,250 AND UNDER \$2,300.....	-	-	-	-	2.5	-	-	-	-	1.9
\$2,300 AND UNDER \$2,350.....	-	-	-	-	2.9	-	-	-	-	1.5
\$2,350 AND UNDER \$2,400.....	-	-	-	-	(2.3)	-	-	-	-	1.2
\$2,400 AND UNDER \$2,450.....	-	-	-	-	-	-	-	-	-	1.8
\$2,450 AND UNDER \$2,500.....	-	-	-	-	-	-	-	-	-	1.0
\$2,500 AND UNDER \$2,600.....	-	-	-	-	-	-	-	-	-	1.9
\$2,600 AND UNDER \$2,700.....	-	-	-	-	-	-	-	-	-	1.6
\$2,700 AND UNDER \$2,800.....	-	-	-	-	-	-	-	-	-	1.9
\$2,800 AND UNDER \$2,900.....	-	-	-	-	-	-	-	-	-	2/
TOTAL .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	4,782	17,441	29,527	34,128	16,054	2,581	11,764	22,813	26,622	20,485
AVERAGE MONTHLY SALARY.....	\$1,019	\$1,184	\$1,396	\$1,629	\$1,860	\$851	\$974	\$1,192	\$1,435	\$1,807

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 1980)

MONTHLY SALARY	COMPUTER OPERATORS					
	I	II	III	IV	V	VI
UNDER \$600.....	2.3	-	-	-	-	-
\$600 AND UNDER \$625.....	2.3	-	-	-	-	-
\$625 AND UNDER \$650.....	2.8	-	-	-	-	-
\$650 AND UNDER \$675.....	4.0	0.8	-	-	-	-
\$675 AND UNDER \$700.....	5.0	1.3	-	-	-	-
\$700 AND UNDER \$725.....	7.4	1.7	(1.5)	-	-	-
\$725 AND UNDER \$750.....	8.3	3.2	1.6	-	-	-
\$750 AND UNDER \$775.....	5.3	4.0	1.2	-	-	-
\$775 AND UNDER \$800.....	7.3	4.3	1.8	-	-	-
\$800 AND UNDER \$825.....	6.5	3.0	3.1	-	-	-
\$825 AND UNDER \$850.....	5.5	6.0	3.6	-	-	-
\$850 AND UNDER \$875.....	5.2	6.4	5.5	-	-	-
\$875 AND UNDER \$900.....	4.4	3.7	3.3	(1.7)	-	-
\$900 AND UNDER \$925.....	5.8	5.0	4.6	1.2	-	-
\$925 AND UNDER \$950.....	3.4	8.4	4.0	1.3	-	-
\$950 AND UNDER \$975.....	4.6	5.4	4.9	1.1	-	-
\$975 AND UNDER \$1,000.....	3.0	5.4	4.9	1.4	-	-
\$1,000 AND UNDER \$1,050.....	5.2	9.4	10.0	6.1	(1.7)	-
\$1,050 AND UNDER \$1,100.....	4.7	4.4	9.9	6.3	1.8	-
\$1,100 AND UNDER \$1,150.....	2.3	2.3	8.2	6.2	2.0	-
\$1,150 AND UNDER \$1,200.....	1.9	2.1	8.6	7.9	5.4	-
\$1,200 AND UNDER \$1,250.....	(2.6)	13.0	5.0	8.4	4.5	(1.6)
\$1,250 AND UNDER \$1,300.....	-	4.9	4.4	9.8	9.9	1.0
\$1,300 AND UNDER \$1,350.....	-	2.1	3.1	8.9	9.3	1.9
\$1,350 AND UNDER \$1,400.....	-	.5	2.3	5.8	4.8	5.9
\$1,400 AND UNDER \$1,450.....	-	1.0	1.7	4.9	6.1	4.0
\$1,450 AND UNDER \$1,500.....	-	(1.9)	1.5	6.1	7.2	4.2
\$1,500 AND UNDER \$1,550.....	-	-	(5.1)	4.1	4.2	16.3
\$1,550 AND UNDER \$1,600.....	-	-	-	3.2	5.9	13.6
\$1,600 AND UNDER \$1,650.....	-	-	-	2.4	5.1	6.9
\$1,650 AND UNDER \$1,700.....	-	-	-	1.9	3.4	8.6
\$1,700 AND UNDER \$1,750.....	-	-	-	1.9	5.3	6.3
\$1,750 AND UNDER \$1,800.....	-	-	-	.8	6.3	13.1
\$1,800 AND UNDER \$1,850.....	-	-	-	2.1	3.3	9.3
\$1,850 AND UNDER \$1,900.....	-	-	-	1.7	2.3	3.1
\$1,900 AND UNDER \$1,950.....	-	-	-	(4.7)	1.1	1.4
\$1,950 AND UNDER \$2,000.....	-	-	-	-	1.3	1.4
\$2,000 AND UNDER \$2,050.....	-	-	-	-	1.7	(1.5)
\$2,050 AND UNDER \$2,100.....	-	-	-	-	1.4	-
\$2,100 AND UNDER \$2,150.....	-	-	-	-	.8	-
\$2,150 AND UNDER \$2,200.....	-	-	-	-	.8	-
\$2,200 AND UNDER \$2,250.....	-	-	-	-	.8	-
\$2,250 AND UNDER \$2,300.....	-	-	-	-	.6	-
\$2,300 AND UNDER \$2,350.....	-	-	-	-	1.0	-
\$2,350 AND UNDER \$2,400.....	-	-	-	-	.6	-
\$2,400 AND UNDER \$2,450.....	-	-	-	-	1.5	-
<b>TOTAL</b> .....	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>NUMBER OF EMPLOYEES</b> .....	<b>6,837</b>	<b>6,285</b>	<b>29,710</b>	<b>16,430</b>	<b>3,729</b>	<b>734</b>
<b>AVERAGE MONTHLY SALARY</b> .....	<b>\$847</b>	<b>\$1,001</b>	<b>\$1,080</b>	<b>\$1,337</b>	<b>\$1,538</b>	<b>\$1,626</b>

<sup>1</sup> For scope of study, see table A-1 in appendix A.  
<sup>2</sup> Less than 0.05 percent.

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.

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

**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 1980)

MONTHLY SALARY	ACCOUNTING CLERKS				FILE CLERKS			KEY ENTRY OPERATORS	
	I	II	III	IV	I	II	III	I	II
\$450 AND UNDER \$475.....	0.6	-	-	-	-	-	-	-	-
\$475 AND UNDER \$500.....	1.3	-	-	-	(0.6)	-	-	-	-
\$500 AND UNDER \$525.....	1.9	-	-	-	4.3	0.8	-	-	-
\$525 AND UNDER \$550.....	2.7	(0.5)	-	-	6.9	1.4	-	(1.4)	-
\$550 AND UNDER \$575.....	5.5	1.2	-	-	14.7	9.7	-	1.8	-
\$575 AND UNDER \$600.....	4.9	1.7	-	-	9.9	7.3	-	2.0	-
\$600 AND UNDER \$625.....	7.5	3.0	-	-	10.4	8.6	(0.6)	3.9	(0.7)
\$625 AND UNDER \$650.....	6.6	2.9	-	-	9.9	9.8	1.4	3.9	1.5
\$650 AND UNDER \$675.....	8.4	5.1	(1.3)	-	10.3	8.2	4.9	6.1	1.9
\$675 AND UNDER \$700.....	8.6	5.4	1.2	-	6.9	8.5	1.6	7.1	2.3
\$700 AND UNDER \$725.....	8.0	4.7	1.8	-	6.6	7.0	8.2	6.5	3.0
\$725 AND UNDER \$750.....	8.1	6.2	1.6	-	4.0	5.9	3.8	7.4	4.5
\$750 AND UNDER \$775.....	5.4	6.9	3.1	-	3.1	3.8	7.2	7.0	3.4
\$775 AND UNDER \$800.....	4.8	6.9	3.1	-	3.2	6.5	6.5	7.3	4.9
\$800 AND UNDER \$825.....	5.4	5.9	4.1	(2.2)	1.8	2.7	6.2	5.3	4.9
\$825 AND UNDER \$850.....	3.7	6.4	4.4	1.7	1.5	4.2	5.1	5.7	4.6
\$850 AND UNDER \$875.....	3.0	5.7	5.9	2.3	1.0	2.4	7.7	5.2	5.1
\$875 AND UNDER \$900.....	2.2	4.7	4.6	1.4	.5	1.2	4.6	3.8	4.9
\$900 AND UNDER \$925.....	1.8	4.7	6.6	1.3	.5	1.2	4.8	3.5	5.4
\$925 AND UNDER \$950.....	1.5	3.4	4.3	2.6	.3	.4	3.1	2.7	5.2
\$950 AND UNDER \$975.....	1.3	3.2	5.3	3.2	.2	.7	6.0	2.9	5.9
\$975 AND UNDER \$1,000.....	1.0	2.7	6.5	3.3	.5	1.4	3.0	2.7	6.2
\$1,000 AND UNDER \$1,050.....	1.0	4.6	10.0	5.3	1.0	1.0	4.7	2.8	7.0
\$1,050 AND UNDER \$1,100.....	1.1	3.0	6.7	6.4	(1.7)	1.1	4.7	2.3	5.5
\$1,100 AND UNDER \$1,150.....	(3.7)	1.5	4.2	6.2	-	1.7	2.9	1.4	4.9
\$1,150 AND UNDER \$1,200.....	-	1.7	5.0	6.8	-	1.0	1.4	1.2	3.8
\$1,200 AND UNDER \$1,250.....	-	2.7	3.7	7.5	-	(3.5)	3.1	.8	3.1
\$1,250 AND UNDER \$1,300.....	-	.8	4.9	8.3	-	-	.5	.4	1.8
\$1,300 AND UNDER \$1,350.....	-	1.1	3.5	7.1	-	-	1.6	.9	1.3
\$1,350 AND UNDER \$1,400.....	-	(3.6)	1.4	3.9	-	-	.6	.5	1.4
\$1,400 AND UNDER \$1,450.....	-	-	1.1	3.9	-	-	.8	.5	.8
\$1,450 AND UNDER \$1,500.....	-	-	.9	4.3	-	-	.8	1.2	1.3
\$1,500 AND UNDER \$1,550.....	-	-	1.0	3.3	-	-	1.1	(2.0)	.9
\$1,550 AND UNDER \$1,600.....	-	-	1.0	4.1	-	-	1.3	-	1.3
\$1,600 AND UNDER \$1,650.....	-	-	(2.8)	3.1	-	-	(1.5)	-	(2.3)
\$1,650 AND UNDER \$1,700.....	-	-	-	3.1	-	-	-	-	-
\$1,700 AND UNDER \$1,750.....	-	-	-	1.4	-	-	-	-	-
\$1,750 AND UNDER \$1,800.....	-	-	-	1.4	-	-	-	-	-
\$1,800 AND UNDER \$1,850.....	-	-	-	1.3	-	-	-	-	-
\$1,850 AND UNDER \$1,900.....	-	-	-	1.5	-	-	-	-	-
\$1,900 AND UNDER \$1,950.....	-	-	-	1.1	-	-	-	-	-
\$1,950 AND OVER.....	-	-	-	2.0	-	-	-	-	-
<b>TOTAL</b> .....	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>NUMBER OF EMPLOYEES</b> .....	<b>31,935</b>	<b>88,878</b>	<b>62,378</b>	<b>21,803</b>	<b>27,876</b>	<b>14,721</b>	<b>4,040</b>	<b>66,771</b>	<b>44,532</b>
<b>AVERAGE MONTHLY SALARY</b> .....	<b>\$734</b>	<b>\$865</b>	<b>\$1,027</b>	<b>\$1,280</b>	<b>\$657</b>	<b>\$736</b>	<b>\$919</b>	<b>\$832</b>	<b>\$977</b>

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 1980)

MONTHLY SALARY	MESSENGERS	PERSONNEL CLERKS				
		I	II	III	IV	V
UNDER \$500.....	0.1	-	-	-	-	-
\$500 AND UNDER \$525.....	2.0	-	-	-	-	-
\$525 AND UNDER \$550.....	5.4	-	-	-	-	-
\$550 AND UNDER \$575.....	7.8	(0.4)	-	-	-	-
\$575 AND UNDER \$600.....	9.2	1.2	-	-	-	-
\$600 AND UNDER \$625.....	10.3	2.7	-	-	-	-
\$625 AND UNDER \$650.....	9.2	5.2	(0.2)	-	-	-
\$650 AND UNDER \$675.....	9.6	6.8	1.4	-	-	-
\$675 AND UNDER \$700.....	7.3	9.9	3.3	(1.3)	-	-
\$700 AND UNDER \$725.....	6.8	8.1	3.8	1.4	-	-
\$725 AND UNDER \$750.....	5.4	10.4	4.6	1.1	-	-
\$750 AND UNDER \$775.....	4.1	7.5	5.1	2.0	-	-
\$775 AND UNDER \$800.....	3.3	6.3	4.4	1.9	-	-
\$800 AND UNDER \$825.....	3.0	8.1	7.1	1.2	-	-
\$825 AND UNDER \$850.....	2.5	7.3	5.0	2.8	(0.7)	-
\$850 AND UNDER \$875.....	1.9	3.8	7.9	5.0	1.5	-
\$875 AND UNDER \$900.....	1.4	4.4	4.5	6.5	.8	-
\$900 AND UNDER \$925.....	1.3	3.9	6.8	3.3	3.1	-
\$925 AND UNDER \$950.....	1.1	.8	5.8	3.0	1.3	-
\$950 AND UNDER \$975.....	1.2	3.4	4.6	6.8	3.5	-
\$975 AND UNDER \$1,000.....	.7	2.2	3.6	6.3	3.3	1.5
\$1,000 AND UNDER \$1,050.....	.9	2.6	7.5	8.7	2.3	.9
\$1,050 AND UNDER \$1,100.....	1.3	.8	4.8	11.0	5.6	.9
\$1,100 AND UNDER \$1,150.....	(4.3)	.3	2.5	9.1	14.5	3.6
\$1,150 AND UNDER \$1,200.....	-	.5	2.7	4.5	4.4	.9
\$1,200 AND UNDER \$1,250.....	-	.2	2.6	4.0	11.0	6.5
\$1,250 AND UNDER \$1,300.....	-	.4	1.8	4.1	6.4	2.2
\$1,300 AND UNDER \$1,350.....	-	.2	2.5	3.7	6.7	.2
\$1,350 AND UNDER \$1,400.....	-	-	1.3	2.3	6.8	13.9
\$1,400 AND UNDER \$1,450.....	-	2.1	.5	1.3	1.9	12.3
\$1,450 AND UNDER \$1,500.....	-	(.2)	1.6	3.4	2.2	5.1
\$1,500 AND UNDER \$1,550.....	-	-	1.3	.9	1.9	6.5
\$1,550 AND UNDER \$1,600.....	-	-	1.6	.6	1.5	4.8
\$1,600 AND UNDER \$1,650.....	-	-	(1.1)	1.1	2.6	2.9
\$1,650 AND UNDER \$1,700.....	-	-	-	1.3	5.8	3.4
\$1,700 AND UNDER \$1,750.....	-	-	-	(1.2)	2.4	.3
\$1,750 AND UNDER \$1,800.....	-	-	-	-	1.4	3.4
\$1,800 AND UNDER \$1,850.....	-	-	-	-	.8	.9
\$1,850 AND UNDER \$1,900.....	-	-	-	-	1.1	2.4
\$1,900 AND UNDER \$1,950.....	-	-	-	-	1.1	1.7
\$1,950 AND UNDER \$2,000.....	-	-	-	-	2.2	1.5
\$2,000 AND UNDER \$2,050.....	-	-	-	-	1.0	.9
\$2,050 AND UNDER \$2,100.....	-	-	-	-	1.9	1.7
\$2,100 AND UNDER \$2,150.....	-	-	-	-	.1	2.9
\$2,150 AND UNDER \$2,200.....	-	-	-	-	-	2.4
\$2,200 AND UNDER \$2,250.....	-	-	-	-	-	2.7
\$2,250 AND UNDER \$2,300.....	-	-	-	-	-	3.6
\$2,300 AND UNDER \$2,350.....	-	-	-	-	-	2.4
\$2,350 AND UNDER \$2,400.....	-	-	-	-	-	7.4
\$2,500 AND UNDER \$2,600.....	-	-	-	-	-	.2
TOTAL .....	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES.....	18,360	2,273	5,343	3,930	1,942	584
AVERAGE MONTHLY SALARY.....	\$713	\$799	\$961	\$1,075	\$1,311	\$1,653

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 1980)

MONTHLY SALARY	SECRETARIES					STENOGRAPHERS, GENERAL	STENOGRAPHERS, SENIOR	TYPISTS	
	I	II	III	IV	V			I	II
\$500 AND UNDER \$525.....	-	-	-	-	-	-	-	0.1	-
\$525 AND UNDER \$550.....	-	-	-	-	-	-	-	1.2	-
\$550 AND UNDER \$575.....	-	-	-	-	-	-	-	2.8	-
\$575 AND UNDER \$600.....	-	-	-	-	-	-	-	5.4	(0.8)
\$600 AND UNDER \$625.....	-	-	-	-	-	(0.8)	-	7.6	1.7
\$625 AND UNDER \$650.....	(1.7)	-	-	-	-	1.3	-	8.1	2.5
\$650 AND UNDER \$675.....	1.4	(1.2)	-	-	-	2.1	-	9.5	5.3
\$675 AND UNDER \$700.....	1.6	1.1	-	-	-	2.9	-	8.0	4.8
\$700 AND UNDER \$725.....	2.6	1.6	-	-	-	3.9	(1.2)	8.6	4.9
\$725 AND UNDER \$750.....	3.3	2.0	(1.6)	-	-	4.7	1.3	6.8	5.2
\$750 AND UNDER \$775.....	5.0	1.9	1.1	-	-	6.1	1.7	7.4	6.2
\$775 AND UNDER \$800.....	4.3	2.7	1.4	-	-	4.5	2.0	5.7	4.9
\$800 AND UNDER \$825.....	5.4	2.8	1.8	(2.0)	-	5.9	2.6	4.7	5.7
\$825 AND UNDER \$850.....	7.0	3.9	2.2	1.5	-	5.2	2.2	3.8	5.3
\$850 AND UNDER \$875.....	7.1	4.8	2.7	1.6	-	4.2	3.1	2.9	5.0
\$875 AND UNDER \$900.....	5.3	4.2	2.5	1.0	-	4.1	2.7	2.7	5.4
\$900 AND UNDER \$925.....	6.2	5.1	3.3	2.4	-	4.2	3.7	2.0	4.5
\$925 AND UNDER \$950.....	4.7	4.4	3.3	1.9	(2.3)	3.9	2.8	1.7	3.8
\$950 AND UNDER \$975.....	5.7	5.0	4.0	2.8	1.0	3.6	3.3	1.3	3.8
\$975 AND UNDER \$1,000.....	5.8	5.9	4.0	3.1	2.2	2.0	3.6	1.0	3.7
\$1,000 AND UNDER \$1,050.....	9.4	8.7	8.9	6.3	4.2	4.9	6.3	1.6	4.3
\$1,050 AND UNDER \$1,100.....	7.8	8.1	7.8	6.4	5.6	4.8	5.8	1.2	3.6
\$1,100 AND UNDER \$1,150.....	5.2	7.5	7.6	7.1	5.8	6.0	7.5	1.4	3.0
\$1,150 AND UNDER \$1,200.....	3.4	6.7	8.4	7.6	6.4	5.6	6.0	(4.4)	3.2
\$1,200 AND UNDER \$1,250.....	1.9	5.2	6.9	6.9	5.8	4.2	9.7	-	3.8
\$1,250 AND UNDER \$1,300.....	1.7	4.3	6.5	6.0	6.0	2.3	7.8	-	1.7
\$1,300 AND UNDER \$1,350.....	1.3	3.4	4.9	6.1	6.0	1.0	6.4	-	1.3
\$1,350 AND UNDER \$1,400.....	(2.2)	2.0	3.7	6.0	4.8	1.0	3.5	-	1.2
\$1,400 AND UNDER \$1,450.....	-	1.9	3.2	5.4	6.5	1.1	3.3	-	.7
\$1,450 AND UNDER \$1,500.....	-	1.5	2.9	4.6	4.8	2.6	2.5	-	1.1
\$1,500 AND UNDER \$1,550.....	-	1.3	2.2	3.9	5.1	3.1	4.2	-	(2.9)
\$1,550 AND UNDER \$1,600.....	-	1.3	1.9	3.4	4.8	2.3	2.6	-	-
\$1,600 AND UNDER \$1,650.....	-	(1.8)	1.7	2.8	4.4	(1.6)	1.7	-	-
\$1,650 AND UNDER \$1,700.....	-	-	1.2	2.6	5.0	-	(2.5)	-	-
\$1,700 AND UNDER \$1,750.....	-	-	1.2	2.0	3.7	-	-	-	-
\$1,750 AND UNDER \$1,800.....	-	-	.9	1.4	2.9	-	-	-	-
\$1,800 AND UNDER \$1,850.....	-	-	.6	1.1	1.8	-	-	-	-
\$1,850 AND UNDER \$1,900.....	-	-	1.1	(4.1)	2.2	-	-	-	-
\$1,900 AND UNDER \$1,950.....	-	-	(.6)	-	2.8	-	-	-	-
\$1,950 AND UNDER \$2,000.....	-	-	-	-	1.5	-	-	-	-
\$2,000 AND OVER.....	-	-	-	-	4.3	-	-	-	-
<b>TOTAL</b> .....	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>NUMBER OF EMPLOYEES</b> .....	<b>42,766</b>	<b>83,137</b>	<b>90,534</b>	<b>50,005</b>	<b>16,200</b>	<b>20,980</b>	<b>19,333</b>	<b>43,586</b>	<b>27,621</b>
<b>AVERAGE MONTHLY SALARY</b> .....	<b>\$941</b>	<b>\$1,051</b>	<b>\$1,168</b>	<b>\$1,282</b>	<b>\$1,428</b>	<b>\$992</b>	<b>\$1,156</b>	<b>\$763</b>	<b>\$918</b>

<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 1980)

OCCUPATION AND LEVEL	MINING	CONSTRUCTION	MANUFACTURING	PUBLIC UTILITIES	WHOLESALE TRADE	RETAIL TRADE	FINANCE, INSURANCE AND REAL ESTATE	SELECTED SERVICES
<b>PROFESSIONAL AND ADMINISTRATIVE</b>								
ACCOUNTANTS.....	4	(5)	66	10	4	4	9	(5)
AUDITORS.....	(5)	(5)	39	14	(5)	6	34	(5)
PUBLIC ACCOUNTANTS.....	-	-	-	-	-	-	-	100
CHIEF ACCOUNTANTS.....	(5)	(5)	74	4	4	5	8	(5)
ATTORNEYS.....	4	(5)	31	11	(5)	(5)	50	(5)
BUYERS.....	(5)	(5)	83	4	(5)	(5)	(5)	4
JOB ANALYSTS.....	(5)	(5)	54	9	(5)	(5)	28	4
DIRECTORS OF PERSONNEL.....	(5)	(5)	69	(5)	(5)	4	13	6
CHEMISTS.....	(5)	(5)	92	(5)	(5)	-	(5)	4
ENGINEERS.....	(5)	(5)	74	6	(5)	(5)	(5)	15
<b>TECHNICAL SUPPORT</b>								
ENGINEERING TECHNICIANS.....	(5)	(5)	79	4	(5)	-	-	13
DRAFTERS.....	(5)	4	70	7	(5)	(5)	(5)	15
COMPUTER OPERATORS.....	(5)	(5)	41	9	6	6	24	12
<b>CLERICAL</b>								
ACCOUNTING CLERKS.....	(5)	(5)	42	14	9	14	16	(5)
FILE CLERKS.....	(5)	(5)	18	7	5	(5)	62	4
KEY ENTRY OPERATORS.....	(5)	(5)	40	7	9	9	22	12
MESSENGERS.....	(5)	(5)	31	9	(5)	6	42	8
PERSONNEL CLERKS.....	(5)	(5)	63	7	(5)	6	15	5
SECRETARIES.....	(5)	(5)	50	9	5	4	23	6
STENOGRAPHERS.....	(5)	(5)	48	28	5	(5)	11	(5)
TYPISTS.....	(5)	(5)	40	9	(5)	4	35	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 1980)

(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	104	96	96	94	96
AUDITORS.....	111	102	105	107	95	96	91	103
PUBLIC ACCOUNTANTS.....	-	-	-	-	-	-	-	100
CHIEF ACCOUNTANTS.....	118	(5)	100	(5)	(5)	89	102	95
ATTORNEYS.....	108	(5)	106	98	(5)	93	97	96
BUYERS.....	115	102	99	108	109	104	96	98
JOB ANALYSTS.....	(5)	86	105	107	(5)	(5)	88	(5)
DIRECTORS OF PERSONNEL.....	123	109	101	123	110	91	95	91
CHEMISTS.....	122	(5)	100	97	(5)	-	(5)	97
ENGINEERS.....	113	100	100	102	96	(5)	(5)	98
<b>TECHNICAL SUPPORT</b>								
ENGINEERING TECHNICIANS.....	114	110	99	110	(5)	-	-	99
DRAFTERS.....	105	108	99	103	94	92	(5)	102
COMPUTER OPERATORS.....	99	(5)	105	114	101	(5)	91	90
<b>CLERICAL</b>								
ACCOUNTING CLERKS.....	112	99	101	118	99	93	88	96
FILE CLERKS.....	114	(5)	111	121	104	100	93	103
KEY ENTRY OPERATORS.....	112	96	105	121	100	95	89	93
MESSENGERS.....	106	97	105	122	119	96	91	96
PERSONNEL CLERKS.....	121	(5)	102	110	(5)	(5)	88	95
SECRETARIES.....	113	92	103	111	100	89	90	101
STENOGRAPHERS.....	91	89	102	105	108	85	82	88
TYPISTS.....	101	98	105	120	107	100	87	101

<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 1980)

OCCUPATION AND LEVEL	MINING	CON- STRUCTION	MANU- 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	39.5	39.5	39.5	39.5	39.5	38.0	39.5
AUDITORS.....	40.0	40.0	39.5	39.5	39.0	38.5	38.0	38.5
PUBLIC ACCOUNTANTS.....	-	-	-	-	-	-	-	39.5
CHIEF ACCOUNTANTS.....	40.0	(6)	40.0	(6)	(6)	40.0	39.0	40.0
ATTORNEYS.....	39.5	(6)	39.0	39.0	(6)	38.5	38.0	39.5
BUYERS.....	40.0	40.0	40.0	39.5	39.5	39.0	38.0	40.0
JOB ANALYSTS.....	(6)	40.0	39.5	39.0	(6)	(6)	38.5	(6)
DIRECTORS OF PERSONNEL.....	40.0	40.0	40.0	39.5	38.5	40.0	38.5	40.0
CHEMISTS.....	40.0	(6)	39.5	40.0	(6)	-	(6)	39.5
ENGINEERS.....	40.0	40.0	40.0	39.5	39.0	(6)	(6)	39.5
<b>TECHNICAL SUPPORT</b>								
ENGINEERING TECHNICIANS.....	40.0	40.0	40.0	40.0	(6)	-	-	39.5
DRAFTERS.....	40.0	40.0	40.0	39.5	39.5	38.0	(6)	40.0
COMPUTER OPERATORS.....	40.0	(6)	39.5	39.0	39.5	(6)	38.5	39.5
<b>CLERICAL</b>								
ACCOUNTING CLERKS.....	40.0	39.5	39.5	39.5	40.0	39.0	38.0	39.0
FILE CLERKS.....	40.0	(6)	39.5	40.0	40.0	39.0	38.0	39.5
KEY ENTRY OPERATORS.....	40.0	39.5	39.5	39.5	39.5	39.0	38.5	39.5
MESSENGEES.....	40.0	40.0	39.0	39.0	39.5	38.5	38.0	38.0
PERSONNEL CLERKS.....	40.0	(6)	40.0	39.5	(6)	(6)	38.0	39.0
SECRETARIES.....	40.0	40.0	39.5	39.0	39.5	39.0	38.0	39.0
STENOGRAPHERS.....	39.0	40.0	39.5	39.5	38.5	40.0	38.0	39.0
TYPISTS.....	40.0	40.0	39.5	39.5	39.5	39.5	37.5	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 1979 survey sampling frame using data from the most recently available (usually March 1978) 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 1980 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 1979 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 1980.<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.

**Table A-1. Number of establishments and workers within scope of survey and number studied, by industry division, United States, March 1980**

Industry division <sup>1</sup>	Minimum employment in establishments within scope of survey	Within scope of survey				Studied			
		Number of establishments	Workers in establishments			Number of establishments	Workers in establishments		
			Total	Professional and administrative	Clerical and technical support		Total	Professional and administrative	Clerical and technical support
<b>United States</b>									
All industries <sup>2</sup>	—	40,774	23,282,036	4,524,314	5,157,755	3,426	6,995,034	1,636,842	1,589,876
Manufacturing	<sup>3</sup> 100-250	19,846	12,928,282	2,339,996	1,730,509	1,686	4,100,969	931,383	594,456
Nonmanufacturing:									
Mining	250	442	338,935	62,999	46,134	75	89,531	23,529	16,670
Construction	250	514	237,936	50,112	33,490	66	63,249	21,905	14,693
Transportation, communication, electric, gas, and sanitary services	<sup>4</sup> 100-250	3,815	2,814,813	518,171	679,595	421	1,256,323	277,574	343,729
Wholesale trade	100	4,363	890,896	234,722	251,104	236	67,468	24,491	23,431
Retail trade	250	3,617	3,072,738	309,640	797,127	289	568,939	60,576	144,186
Finance, insurance, and real estate	100	5,931	2,276,520	661,697	1,373,056	410	614,298	178,436	383,396
Selected services <sup>5</sup>	<sup>6</sup> 50-100	2,246	721,916	346,977	246,740	243	234,257	118,948	69,315
<b>Metropolitan areas<sup>7</sup></b>									
All industries	—	32,919	19,655,380	4,083,854	4,749,191	2,903	6,457,469	1,544,940	1,523,406
Manufacturing	<sup>3</sup> 100-250	14,558	10,170,148	2,042,630	1,502,319	1,317	3,683,024	865,256	548,457
Nonmanufacturing:									
Mining	250	214	162,534	38,478	28,962	38	48,320	15,205	10,934
Construction	250	387	172,923	43,918	28,600	49	47,374	19,642	13,316
Transportation, communication, electric, gas, and sanitary services	<sup>4</sup> 100-250	2,834	2,455,738	466,992	613,590	374	1,214,419	269,705	337,615
Wholesale trade	100	3,756	817,050	224,565	242,555	217	65,878	24,271	23,240
Retail trade	250	3,377	2,997,796	300,334	779,708	279	565,405	59,955	143,310
Finance, insurance, and real estate	100	5,596	2,178,493	628,330	1,316,058	392	607,274	175,932	379,447
Selected services <sup>5</sup>	<sup>6</sup> 50-100	2,197	700,698	338,607	237,399	237	225,775	114,974	67,087
<b>Establishments employing 2,500 workers or more</b>									
All industries	—	1,111	7,203,089	1,614,219	1,626,804	786	5,317,008	1,274,523	1,197,366
Manufacturing	<sup>3</sup> 100-250	550	4,137,340	961,765	610,817	472	3,271,700	780,112	477,596

<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 products. 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 sanitary services; and pipelines; and 250 for all other transportation industries. U.S. Postal Service 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 in 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.

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 1980 survey, salary data were not available from about 14 percent of the assigned sample establishments (representing 2,908,000 employees in the total universe). An additional 4 percent of the sampled establishments (representing 740,000 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 91 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-

<sup>5</sup>Those with 5 percent or more were: Chief accountants I, II, III, and IV-9, 7, 5, and 7 percent, respectively; Attorneys VI-9 percent; and Directors of personnel II, III and IV-12, 9, and 30 percent, respectively.

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. Increases for each of the two broad occupational groups (the professional, administrative, and technical support group; and the clerical group) were obtained by calculating a simple mean of the increases reported for the occupations within the group. Increases for all survey occupations combined were determined by averaging the increases for the two broad occupational groups. Annual percentage increases were then linked to compute average annual rates of increase for each occupation and group and for all occupations combined.

Year-to-year percent increases for each group specified in text table 3 and chart 1 were determined by adding average salaries for all occupational levels in the group for 2 consecutive years, and dividing the later sum by the earlier sum. The trends in chart 1 and 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 classifi-

<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.



cation 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.

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 occupa-

tions 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 1980 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 91 published occupational work levels, estimated relative standard errors for the average salary estimates were distributed as follows: 56 were under 1 percent; 19 were between 1 and 2 percent; 8 were between 2 and 3 percent; 6 were between 3 and 4 percent; and 2 were between 4 and 5 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 1980 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.

## Appendix B. Survey Changes in 1980

### Changes in occupational definitions

The definitions for accountant, chief accountant, and auditor were revised to improve clarity during the job matching process. A new work level (accountant VI), designed to include specialists in complex accounting systems, also was added.

The definitions for secretary, stenographer, and typist

were revised to conform to new Federal classification standards—a requirement for job definitions in the pay comparability process. A purchasing clerk occupation was tested for a second time but results cannot be published due to problems encountered in applying the survey definition because of the diversity of purchasing functions and organizations among establishments.

# 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. Also see note referring to the definitions for the drafting and clerical occupations at the end of this appendix.

## 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 judgement 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 and 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 judgement 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 judgement, 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 judgement, 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 principle 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.).

## 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 maintenance 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* integrated 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.

#### **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



**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.
	<i>or</i>		
	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	<i>or</i>		
	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	<i>or</i>		
	AR-2	TC-3	About 15 to 20 professional accountants. Many of these match the accountant IV job definition, but some may match the accountant V job definition.
	AR-3	TC-1	About 5 to 10 professional accountants. Most of these match the accountant III job definition, but one or two may match as high as accountant V.
V	<i>or</i>		
	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.
	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 on the accompanying text.

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.;
- (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 the table which follows the definitions below.

## 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 special 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 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 account is responsible, there are clerical, machine operation, bookkeeping and related personnel.

### **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. Receives 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 judgement, 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

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

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.

## 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-2 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-2. 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 manufactured; 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.



# Personnel Management

## JOB ANALYST

Perform work involved in collecting, analyzing, and developing occupational data relative to jobs, job qualifications, and worker characteristics as a basis for compensating forms 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. Work independently on such assignments but is limited by defined area 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 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 which there 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).*

*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 of work<sup>2</sup> in accordance with the criteria shown in table C-3.

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

**Table C-3. 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.

# 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-

inates, 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.

### **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.

## **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 adjustments 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 and distributing mail, and other minor clerical work. *Excluded* are positions that require operation of a motor vehicle as a significant duty.

## **PERSONNEL CLERK (EMPLOYMENT)**

Personnel clerks (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 primarily provide basic information to current and prospective employees, maintain personnel records and information listings, and prepare and process papers on personnel actions. At the higher levels, clerks (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 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:*

Clerks who primarily compute and process payrolls or compute and/or respond to questions on company benefits or retirement claims;

Workers responsible for maintaining and safeguarding personnel record files for a company;

Workers whose duties do not require a knowledge of the company's personnel rules and procedures, such as receptionists, messengers, typists, or stenographers;

Workers in developmental personnel professional positions, generally requiring a college degree or equivalent administrative experience; and

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 (Employment) I**

Performs routine tasks while receiving training and gaining experience in applying company personnel procedures and policies. Provides employment information and appropriate forms to applicants or employees on types of jobs being filled, procedures to follow, and sources of additional information. Ensures that the proper company forms are completed for name changes, locator information, applications, etc. Reviews completed forms for signatures, proper entries, etc. May maintain assigned segments of company personnel records, posting such items as dates of promotion, transfer, and hire; 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 credit checks on employees. Some receptionist or other clerical duties may be performed.

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 (Employment) II**

Examines and/or processes personnel action documents, ensuring 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 action from a number of alternatives. Responds to questions from applicants, employees, or managers when such information is readily available or can be obtained from file material or manuals. 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 are relied upon to alert higher level clerks or supervisor to such situations. Work may be spot checked periodically.

### **Personnel Clerk (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 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, 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 (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 postplacement 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 and 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 (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 incidently perform some clerical duties. Supervisory review is similar to level IV.

## SECRETARY

Provides principal secretarial support in an office, usually to one individual, and in some cases to the subordinate staff of that individual. Maintains a close and highly responsible 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 understanding of the organization, programs, and procedures related to the work of the office.

*Exclusions.* Not all positions that are 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 other secretaries or administrative assistants;
- b. Stenographers not fully trained in secretarial duties;
- c. Stenographers or secretaries serving as office assistants to a group of professional, technical, or managerial persons only;

- d. Assistant-type positions which entail more difficult or more responsible technical, administrative, or supervisory duties which are not typical of secretarial work, e.g., administrative assistant, or executive assistant;
- e. Secretaries performing routine duties or following detailed and specific instructions and guidelines; typically these positions perform duties that are less than the lowest level described below (LR-1);
- f. Positions which do not fit any of the situations listed in the section below titled "Level of Secretary's Supervisor," e.g., secretary to the president of a company that employs, in all, over 5,000 persons;
- g. Trainees.

### Classification by level

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

### Level of Secretary's Supervisor

Secretaries should be matched at one of the four LS levels described below according to the level of the secretary's supervisor within the company organizational structure.

- LS-1 a. Secretary to the supervisor or head of a small organizational unit (e.g., fewer than about 25 or 30 persons). The supervisor usually directs employees through face-to-face meetings; or
- b. Secretary to a nonsupervisory staff specialist, professional employee, administrative officer, skilled technician, or expert. *NOTE:* Many companies assign stenographers, rather than secretaries, as described above, to this level of supervisory or nonsupervisory worker.)
- LS-2 a. Secretary to an executive or managerial person whose responsibility is not equivalent to one of the specific level situations in the definition for LS-3, but whose organizational unit normally numbers at least several dozen employees and is usually divided into organizational segments which are often, in turn, further subdivided. In some companies, this level includes a wide range of organizational echelons; in others, only one or two. The supervisor usually directs activities through project or unit managers; or
- b. Secretary to the head of an individual plant, factory, etc., (or other equivalent level of official) that employs, in all, fewer than 5,000 persons.
- LS-3 a. Secretary to a corporate officer (other than chairman of the board or president) of a com-

pany that employs, in all over 100 but fewer than 5,000 persons; or

- b. Secretary to the head (immediately below the officer level) over either a major corporate-wide functional activity (e.g., marketing, research, operations, industrial relations, etc.) or a major geographic or organizational segment (e.g., a regional headquarters, or a major division) of a company that employs, in all, over 5,000 but fewer than 25,000 employees; or
- c. Secretary to the head of an individual plant, factory, etc. (or other equivalent level of official) that employs, in all, over 5,000 persons; or
- d. Secretary to the head of a large and important organizational segment (e.g., a middle management supervisor of an organizational segment often involving as many as several hundred persons) of a company that employs, in all, over 25,000 persons.

- LS-4
- a. Secretary to the chairman of the board or president of a company that employs, in all, over 100 but fewer than 5,000 persons; or
  - b. Secretary to a corporate officer (other than the chairman of the board or president) of a company than employs, in all over 5,000, but fewer than 25,000 persons; or
  - c. Secretary to the head, immediately below the corporate officer level, of a major segment or subsidiary of a company that employs, in all, over 25,000 persons.

*NOTE:* The term "corporate officer," used in the above LS definitions refers to those officials who have a significant corporate-wide policymaking role with regard to major company activities. The title "vice president," though normally indicative of this role, does not in all cases identify such positions. Vice presidents whose primary responsibility is to act personally on individual cases or transactions (e.g., approve or deny individual loan or credit actions; administer individual trust accounts; directly supervise a clerical staff) are not considered to be "corporate officers" for purposes of applying the definition.

### 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 judgement. Secretaries should be matched at LR-1 or LR-2 described below according to their level of responsibility.

*LR-1.* Works under general instructions and guidance as needed; carries out recurring work of the office independently; selects appropriate guidelines, references and procedures for application to specific cases. Performs a full

range of procedural office duties that involve various related steps, processes, or methods.

Performs varied secretaries duties including or comparable to most of the following:

- a. Maintains supervisor's calendar and makes appointments as instructed.
- b. Reviews correspondence, memoranda, and reports prepared by others for the supervisor's signature to assure procedural and typographic accuracy.
- c. Makes travel arrangements for supervisor and staff.
- d. Notifies staff of meetings or conferences.
- e. Requisitions supplies, printing, or other services.
- f. Prepares scheduled reports from readily available information in the files.
- g. Reviews publications for articles of special interest to the supervisor or staff.
- h. Answers telephone, greets personal callers, and opens incoming mail.
- i. Answers telephone requests which have standard answers. May reply to requests by sending a form letter.
- j. Types, takes and transcribes dictation, and files.

*LR-2.* Works independently to achieve defined objectives; handles problems and deviations in accordance with established instructions, priorities and program goals. Guidelines include a large number of unwritten policies, precedents, and practices.

Performs duties under LR-1 and, in addition, performs tasks requiring greater judgement, initiative, and knowledge of office functions. Work consists of various different and unrelated processes and methods, including or comparable to most of the following:

- a. Schedules tentative appointments without prior clearance. Assembles necessary background material for scheduled meetings. Makes arrangements for meetings and conferences.
- b. Screens telephone and personal callers, determining which can be handled by the supervisor's subordinates or other offices.
- c. Answers requests which require a detailed knowledge of office procedures or collection of information from files or other offices. *May* sign routine correspondence in own or supervisor's name.
- d. Prepares special or one-time reports from information selected and extrapolated from different sources on the basis of general instructions.
- e. Explains supervisor's requirements to other employees in supervisor's unit. (Also types, takes dictation and files.)



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

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

**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.

*NOTE:* This job is distinguished from that of a secretary in that a secretary normally works as the principal office assistant performing more responsible and discretionary tasks.

**Stenographer, General**

Takes and transcribes dictation under close supervision and detailed instructions. May maintain files, keep simple records, or perform other relatively routine clerical tasks.

**Stenographer, Senior**

Takes and transcribes dictation determining the most appropriate format. Performs stenographic duties requiring significantly greater independence and responsibility than general stenographer. Supervisor typically provides general instructions. Work requires a thorough working knowledge of general business and office procedure 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.

*NOTE:* Excluded are stenographers above this level who take dictation involving the frequent use of wide variety of technical or specialized vocabulary. Typically this kind of vocabulary *cannot* be learned by a relatively short period of time, e.g., a month or two.

**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 material; 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 title and definition for messenger is the same as that used in the Bureau's program of occupational wage surveys in metropolitan areas. The occupations listed below have the same definition in both the national and area surveys; however, the level designations differ as shown:

Occupation	National Survey of Professional, Administrative, Technical, and Clerical Pay	Occupational Wage Surveys in Metropolitan Areas
Accounting clerks <sup>1</sup> .....	I	D
	II	C
	III	B
	IV	A
Drafters <sup>1</sup> .....	I	E
	II	D
	III	C
	IV	B
	V	A
File clerks .....	I	C
	II	B
Key entry operators .....	III	A
	I	B
	II	A

<sup>1</sup> The 4-level definition for accounting clerk was introduced in the area surveys in calendar year 1980 and the 5-level drafter definition, in 1979. Three years are required to bring new job definitions into all areas covered by the program.

## **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 1980	Salary rates for Federal employees under the General Schedule, March 1980 <sup>3</sup>											
		Grade <sup>4</sup>	Average <sup>5</sup> March 1980	Step <sup>6</sup>									
				1	2	3	4	5	6	7	8	9	10
File clerks I Messengers .	\$7,889 8,561	GS 1	\$7,311	\$7,210	\$7,450	\$7,690	\$7,930	\$8,170	\$8,410	\$8,650	\$8,890	\$8,902	\$9,126
Accounting clerks I . Drafters I . . . . . File Clerks II . . . . . Key entry operators I . Typists I . . . . .	8,806 10,216 8,829 9,981 9,161	GS 2	8,303	8,128	8,399	8,670	(8,902)	9,002	9,267	9,532	9,797	10,062	10,327
Accounting clerks II Drafters II . . . . . Engineering technicians I . File clerks III . . . . . Key entry operators II . . . . . Personnel clerks I . . . . . Stenographers, general . Typists II . . . . .	10,377 11,689 12,228 11,026 11,723 9,591 11,899 11,010	GS 3	9,558	8,952	9,250	9,548	(9,846)	10,144	10,442	10,740	11,038	11,336	11,634
Accounting clerks III . Computer operators I . Drafters III . . . . . Engineering technicians II . Personnel clerk II . . . . . Secretaries I . . . . . Stenographers, senior .	12,328 10,164 14,308 14,212 11,529 11,296 13,876	GS 4	11,152	10,049	10,384	10,719	(11,054)	11,389	11,724	12,059	12,394	12,729	13,064
Accounting clerks IV . Accountants I . . . . . Auditors I . . . . . Buyers I . . . . . Chemists I . . . . . Computer operators II . . . . . Drafters IV . . . . . Engineers I . . . . . Engineering technicians III . Job analysts I . . . . . Personnel clerks III . . . . . Secretaries II . . . . .	15,358 15,149 14,858 14,861 16,200 12,016 17,215 19,411 16,756 16,056 12,896 12,611	GS 5	12,744	11,243	11,618	11,993	(12,368)	12,743	13,118	13,493	13,868	14,243	14,618
Computer operators III . Personnel clerks IV . . . . . Secretaries III . . . . .	12,957 15,726 14,018	GS 6	14,423	12,531	12,949	13,367	(13,785)	14,203	14,621	15,039	15,457	15,875	16,293

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 1980	Salary rates for Federal employees under the General Schedule, March 1980 <sup>3</sup>												
		Grade <sup>4</sup>	Average <sup>5</sup> March 1980	Step <sup>6</sup>										
				1	2	3	4	5	6	7	8	9	10	
Accountants II	18,427	GS 7	\$15,729	\$13,925	\$14,389	\$14,853	\$15,317	\$15,781	\$16,245	\$16,709	\$17,173	\$17,637	\$18,101	
Auditors II	18,002													
Buyers II	18,467													
Chemists II	19,571													
Computer operators IV	16,050													
Drafters V	21,690													
Engineers II	21,285													
Engineering technicians IV	19,547													
Job analysts II	16,795													
Personnel clerks V	19,837													
Public accountants I	14,958													
Secretaries IV	15,382													
Computer operators V	18,454			GS 8	17,893	15,423	15,397	16,451	16,965	17,479	17,993	18,507	19,021	19,535
Secretaries V	17,132													
Accountants III	21,299	GS 9	19,110	17,035	17,603	18,171	18,739	19,307	19,875	20,443	21,011	21,579	22,147	
Attorneys I	20,911													
Auditors III	22,026													
Buyers III	22,904													
Chemists III	23,373													
Computer operator VI	19,511													
Engineers III	24,160													
Engineering technicians V	22,323													
Job analysts III	21,484													
Public accountants II	16,689													
Accountants IV	26,158	GS 11	23,331	20,611	21,298	21,985	22,672	23,359	24,046	24,733	25,420	26,107	26,794	
Attorneys II	25,549													
Auditors IV	26,782													
Buyers IV	27,777													
Chemists IV	27,681													
Chief accountants I	28,347													
Directors of personnel I	24,719													
Engineers IV	28,486													
Job analysts IV	26,315													
Public accountants III	19,806													
Accountants V	31,937	GS 12	27,958	24,703	25,526	26,349	27,172	27,995	28,818	29,641	30,464	31,287	32,110	
Attorneys III	33,034													
Chemists V	33,793													
Chief accountants II	32,662													
Directors of personnel II	31,832													
Engineers V	33,141													
Public accountants IV	23,900													

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 1980	Salary rates for Federal employees under the General Schedule, March 1980 <sup>3</sup>												
		Grade <sup>4</sup>	Average <sup>5</sup> March 1980	Step <sup>6</sup>										
				1	2	3	4	5	6	7	8	9	10	
Accountants VI . . . . .	\$40,292	GS 13	\$33,593	\$29,375	\$30,354	\$31,333	\$32,312	\$33,291	\$34,270	\$35,249	\$36,228	\$37,207	\$38,186	
Attorneys IV . . . . .	40,864													
Chemists VI . . . . .	38,137													
Chief accountants III . . . . .	41,092													
Directors of personnel III . . . . .	37,816													
Engineers VI . . . . .	38,259													
Attorneys V . . . . .	49,864	GS 14	39,635	34,713	35,870	37,027	38,184	39,341	40,498	41,655	42,812	43,969	45,126	
Chemists VII . . . . .	45,883													
Chief accountants IV . . . . .	50,073													
Directors of personnel IV . . . . .	49,730													
Engineers VII . . . . .	43,242													
Attorneys VI . . . . .	60,641	GS 15 <sup>7</sup>	45,731	40,832	42,193	43,554	44,915	46,276	47,637	48,998	50,359	51,720	53,081	
Engineers VIII . . . . .	50,079													

<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 1980, 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 March 31, 1980. 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, and 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.

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 1980, special, higher salary ranges were authorized for professional engineers at the entry grades (GS-5 and GS-7), and at GS-9. 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.

# Bureau of Labor Statistics

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