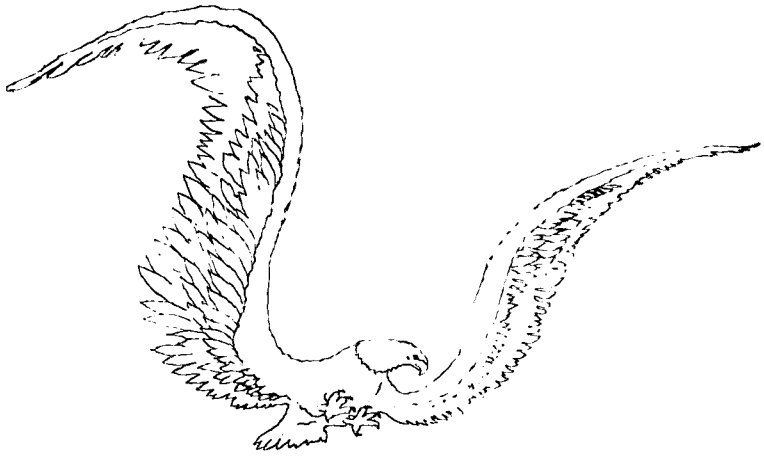
Guide Class Specifications

for Air Pollution Control Positions in State and Local Programs

July 1971

ENVIRONMENTAL PROTECTION AGENCY



ENVIRONMENTAL PROTECTION AGENCY

INTRODUCTION

This booklet was developed by the Office of State Merit Systems and Technical Assistance of the U. S. Civil Service Commission and the Office of Manpower Development of the Office of Air Programs as one means of helping you, as an air pollution control agency official, meet your manpower needs.

The increasing need for personnel in air pollution control agencies has been described in several manpower studies and was further demonstrated in the June 1970 Report "Manpower and Training Needs for Air Pollution Control". In this Report, the number of personnel in State and local agencies is projected to increase from about 2,500 employed at this time to approximately 8,000 by 1974. To obtain this large accession of staff, the ability of air pollution control agencies to hire qualified personnel must be greatly improved.

Establishment of standard job specifications is expected to:

1. Make the merit systems of State, local and regional agencies more responsive to recruiting efforts.
2. Assist in overcoming the lack of standardization.
3. Aid in the creation of new positions.
4. Provide a means for revising existing job specifications.
5. Expand employment opportunities to individuals not now considered qualified.
6. Permit reclassification and increased salary levels.

It is hoped that "Guide Class Specifications for Air Pollution Positions in State and Local Programs" will aid you in developing job specifications and assist in obtaining a competent staff for your agency.

Harry P. Kramer, Sc.D.
Director
Office of Manpower Development

ACKNOWLEDGMENT

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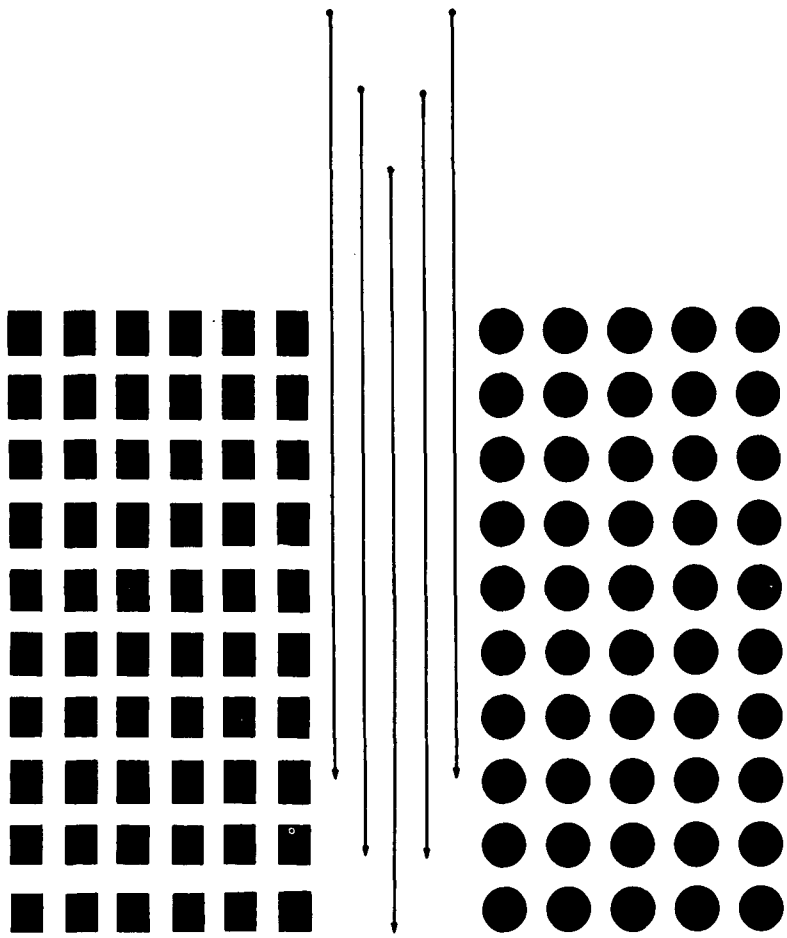
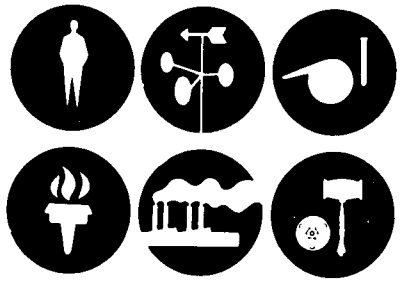


THE CLASSIFICATION PROCESS

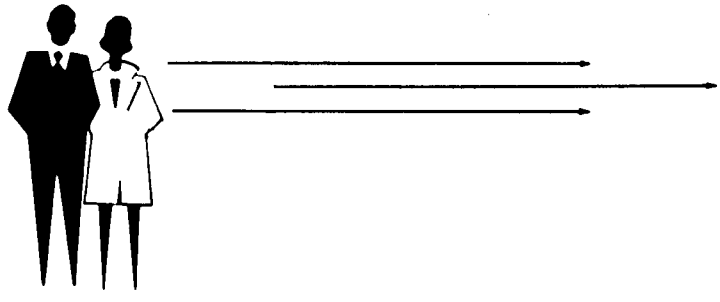


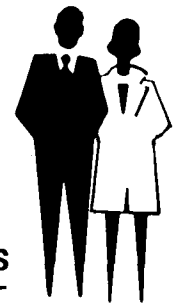
THE CLASSIFICATION PROCESS

USING POSITION SPECIFICATIONS

The basic technique of position classification is the grouping together, in categories or classes, of those positions which are sufficiently similar in duties and responsibilities so that they can be treated alike for various administrative purposes. It provides standard titles and a common language for personnel actions, budgeting, and program planning. The classification plan provides an objective foundation for a compensation plan designed to assure equal pay for equal work. It affords a basis for the systematic recruitment, appointment, and promotion of personnel. Class specifications serve as the basis for development of a practical and normally multi-part examination for assessment of applicant attributes necessary for successful job performance and career development. The validity of the examination depends upon the care with which the skills, knowledges, abilities, and aptitudes sections of the specification are developed. They should reflect the level needed for entrance into the job, since they determine the content of the tests used in the examination process. Depending on the type of position and available manpower resources, work-sample, performance, written or other types of tests may be used to assess the skills, knowledges, abilities and aptitudes needed. Personal qualities necessary for success in the field normally are assessed through an oral examination and evaluation of references. The education and experience requirement provides the basis for a preliminary screening of candidates, admitting to the examination process only those possessing the needed minimum qualifications. In addition, the education and experience requirement also provides a basis for the rating of the quality of the candidates' backgrounds where such a rating is a weighted part of the examination process.

Class specifications help employees and supervisors to understand the duties and responsibilities in job assignments. They are useful in the rating of employee performance and in the development of staff training plans. The classification plan is a valuable tool for encouraging employees to plan a career in the agency by pointing up the opportunities for broader responsibilities and the requirements for advancement.





DEVELOPING AND REVISING CLASSIFICATION PLANS

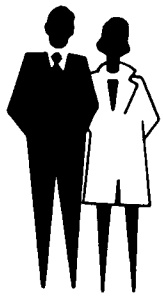
The development or revision of the classification plan for State or local air pollution control positions should involve the use of a number of resources and techniques in addition to guide specifications. After policy decisions have been made about the organization of the program, job descriptions should be prepared by the employees. Background information, including supervisor's comments, program statements, organization charts, reorganization plans, and other materials should be secured. The development of a workable classification scheme necessarily involves a cooperative effort between the program officials and personnel specialists. The official specifications should conform to the established format used in the jurisdiction and should include all features which program and personnel specialists in the jurisdiction are accustomed to utilizing. While the merit system agency usually has the final authority for approval of the specifications, in all cases both program and personnel specialists have vital roles to play in the process. They should be cooperatively involved in the process at the earliest possible time.

2

The guide specifications can be most useful at two points in the development or revision of the agency classification structure. After initial review of the job and program information, program and personnel specialists can consult the guides as one possible approach to setting up a class series – a sequence of related classes which covers all levels in the occupational area and is arranged in order of difficulty and responsibility. Once the basic class structure is decided upon, the guide specifications can be a resource in the preparation of the various sections of the specification and in some instances may provide the actual language used. Caution must be exercised, however, to avoid adopting language from the draft specifications which does not represent the facts concerning the program as it is in the jurisdiction. Most specifications begin with a definition providing a clear, concise statement of the major responsibilities of the positions in the class. In these guide specifications we have used "close supervision", "supervision", "general supervision", and "direction" to show the differences in supervision received. "Close supervision" is defined as receiving detailed instructions with constant review of work; "supervision" as receiving less detailed instructions, except for complex duties, with periodic review of work; "general supervision" as receiving minimal instructions with only results evaluated, and "direction" as receiving very broad guidelines with only results evaluated. The definition should be followed by a sufficient number of examples of work, starting with the more responsible, to cover the range of activities performed. Each example normally is expressed in the same grammatical form.

The last major category in a specification, "minimum qualifications", should include requisites of training, experience, knowledge, skills, abilities, and aptitudes that an employee needs for entrance into the job. Such statements should not include kinds of experience, knowledge, or ability that normally are acquired on the job after appointment. They should not be so narrow as to rule out the recruitment of all except those with an ideal background. They should be reasonably clear from the point of view of prospective applicants. They should be specific enough to be used in reviewing applications of candidates. The establishment of minimum requirements calls for a realistic con-

DEVELOPING AND REVISING CLASSIFICATION PLANS



sideration of the needs of the job and of manpower supply and demand throughout the recruiting area from which most candidates will be drawn. Improperly prepared minimum requirements unnecessarily restrict employees promotability, limit employee reassignments and mobility, and cause employees to seek opportunities elsewhere. In describing the levels of knowledges, a consistent pattern should be followed and the number of levels held to a minimum. Three levels are generally useful. In the guide class specifications presented in this monograph, we have used the terms "thorough knowledge", "knowledge", and "some knowledge".

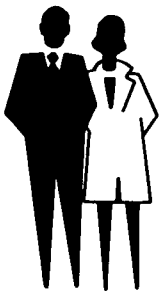
The administrators of State and local air pollution control programs will find that the time devoted to a better classification plan is a worthwhile investment. Such a plan, reflecting program goals, position components, realistic statements of qualifications, will contribute to the achievement of economical and effective program administration.

GUIDE CLASS SPECIFICATIONS FOR AIR POLLUTION CONTROL POSITIONS

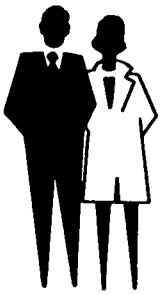
These specifications should be regarded as ***guide or illustrative*** materials to be used in the development of class specifications in State and local air pollution control programs. They are not ready-made substitutes for the careful planning and technical work which must be carried out at the time of installation or revision of a classification structure. Class specifications serve their proper purpose as aids to improved administration when they accurately reflect the program, job content, and organization which exist or have been planned and approved by responsible officials. The classification process should follow, rather than precede, program and organizational decisions.

These specifications should not be interpreted as requiring adherence either to a particular classification structure or to a single type of organization, nor do they represent Federal requirements. They are offered for the assistance of State and local agencies in improving the classification of their jobs. It is possible that some jurisdictions may be able to use the suggested guides without substantial modification, but in many cases adaptation will be necessary. Guide specifications are not to be construed as meaning that each agency should establish positions in all guide classes. No two agencies are identical in their job arrangement. The number of classes necessarily will vary according to the size of the program, the scope of its activities, and other factors. Official State and local specifications should be developed by staff having a comprehensive knowledge of the air pollution control program.

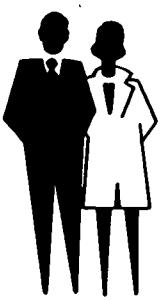
Those State and local programs which find, after investigation, that their needs are different from those envisioned by this publication, can still use the guides as a resource for the needed classification activity.



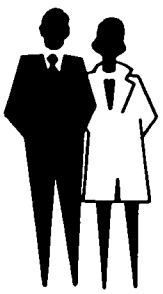
DIRECTORS



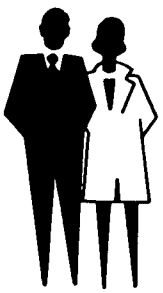
SUPERVISORS



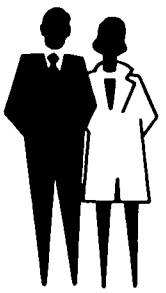
CHEMISTS



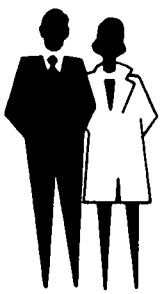
ENGINEERS



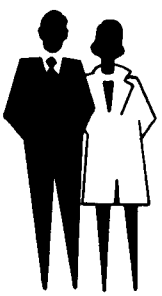
METEOROLOGISTS



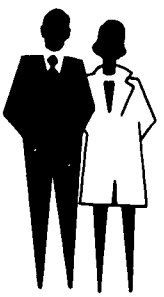
SPECIALISTS



INSPECTORS



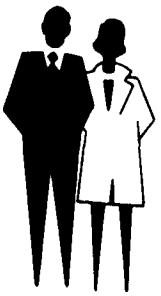
TECHNICIANS



AIDES

AIR POLLUTION CONTROL

DIRECTOR



AIR POLLUTION CONTROL DIRECTOR

DEFINITION

Plans, organizes, and directs the professional, administrative, and technical activities of an air pollution control program; coordinates the program with local, State, regional, Federal, and private agencies and organizations concerned with air pollution and related environmental activities; and evaluates program and personnel effectiveness and initiates improvements.

EXAMPLES OF DUTIES

Plans, organizes, and directs the professional, administrative, and technical activities of the air pollution control program.

Develops, recommends, interprets, and administers air pollution control statutes.

Coordinates a comprehensive air pollution control program with the programs of other governmental organizations concerned with air pollution and related environmental activities at the local, State, Federal and regional levels and of private agencies.

Evaluates air quality control regional plan effectiveness, develops recommendations for plan improvement, and participates in air quality control regional planning.

Evaluates the effectiveness of the air pollution control program and the effectiveness of program personnel and initiates actions to maintain and improve effectiveness.

Insures that air pollution programs, policies, plans, and standards meet applicable laws and regulations.

Directs the development and implementation of a public relations program to educate public and private organizations and individuals to improve air quality.

Represents the air pollution control program at conferences and meetings with public and private officials and organizations.

Develops and presents reports and papers on air pollution control.

Directs the development of the program budget, presents and justifies the budget, and allocates budgeted funds to program activities.

Coordinates and supervises the activities of a staff of professional, administrative, and technical personnel to achieve maximum utilization of manpower, facilities, equipment and material.

Initiates, reviews, approves, and makes recommendations regarding requests for manpower, facilities, equipment, and material.

Develops and administers a personnel program, including manpower planning and the recruitment, orientation, and training of program personnel.

Directs the preparation of program reports and the maintenance of program records.

Performs related duties as required.

MINIMUM QUALIFICATIONS

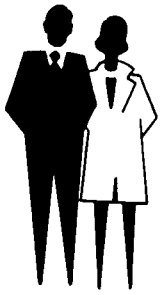
Education and Experience:
Graduation from an accredited college or university and four years of progressively responsible professional experience in air pollution control or a related environmental program which includes at least one year of administrative or supervisory experience,
OR
A combination of education at an accredited college, university, or junior college and progressively responsible professional experience in air pollution control or a related environmental program which totals eight years and includes at least one year of administrative or supervisory experience,
OR
Eight years of progressivley responsible professional experience in air pollution control or a related environmental program which includes at least one year of administrative or supervisory experience.

Substitution:
Successful graduate study in engineering, science, public health or administration, or a related environmental field may be substituted for three of the required four years of progressively responsible experience on a year-for-year basis.
No substitution is permitted for the one year of administrative or supervisory experience.

Knowledges, Skills, and Abilities:
Thorough knowledge of administration, management, supervision, and training.
Thorough knowledge of the principles and practices essential to the identification, control, and reduction of air pollution.
Thorough knowledge of information sources in air pollution control and related environmental programs.
Knowledge of the laws, rules, and regulations applicable in the air pollution control program.
Knowledge of the major types of sources of air pollution.
Skill at analyzing complex documents and technical reports.
Skill at developing and presenting studies and reports orally and in writing.
Skill at establishing and maintaining positive and productive relationships with associates, public and private officials, and the general public.
Ability to plan, organize, and direct the activities of a professional, administrative, and technical staff.
Ability to coordinate the air pollution control program with other air pollution control and related environmental programs.
Ability to evaluate program and personnel effectiveness.
Ability to develop recommendations and to initiate program and personnel improvements.
Ability to represent the air pollution control program to public and private officials, the general public, and to technical and professional organizations.

AIR POLLUTION CONTROL

SUPERVISOR



AIR POLLUTION CONTROL SUPERVISOR

DEFINITION

Under the direction of the Air Pollution Control Director, with broad technical latitude, is responsible for planning a major segment of an air pollution control program; coordinating it with other segments of the program; supervising a professional, administrative, and technical staff; and acting for the Director as designated.

EXAMPLES OF DUTIES

Plans a major segment of an air pollution control program.

Supervises and coordinates as necessary with other segments of the program such functions as:

- Developing, conducting, and maintaining an emission and source inventory;
- Operating and maintaining air monitoring, sampling, and analyzing facilities and equipment;
- Reviewing and acting on requests for new and renewal construction and operation permits;
- Investigating complaints;
- Inspecting facilities and equipment;
- Conducting surveys and special studies.

Develops emergency episode procedures; makes recommendations for invoking the procedures; and may supervise the enforcement of the procedures for the agency.

Develops proposals for needed new standards, regulations, and laws.

Evaluates new local, State, regional, and Federal laws, regulations, and standards for program implications and develops appropriate procedures to carry them out.

Appears at hearings on air pollution violations and presents pertinent data; appears at court actions as an expert witness.

Develops and presents reports and studies on air pollution to management and at conferences and meetings; reviews and evaluates staff reports and studies.

Develops and participates in a public relations program to improve air quality; may carry the responsibility for the program for the agency.

Provides consultative services to public and private agencies and officials on the identification, control, and reduction of air pollution.

Develops the budget for the program segment along with supportive data justifying requests for manpower, facilities, equipment, and material.

Recruits and evaluates candidates for employment, evaluates employees, and makes recommendations to the Director regarding all types of needed personnel actions.

Plans and implements training programs for program staff and for representatives of other public agencies and private organizations interested in air pollution.

May supervise the organization and maintenance of a technical library resource.

Performs related duties as required.

MINIMUM QUALIFICATIONS

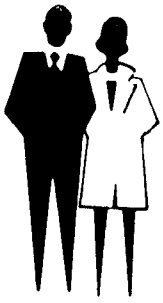
Education and Experience:
Graduation from an accredited college or university and three years of progressively responsible professional experience in air pollution control or a related environmental program.
OR
Any combination of education at an accredited college, university, or junior college and progressively responsible professional experience in air pollution control or a related environmental program which totals seven years and includes at least three years of progressively responsible professional experience.
OR
Seven years or progressively responsible professional experience in air pollution control or a related environmental program.

Substitution:
Successful graduate study in engineering, science, public health or administration, or a related environmental field may be substituted for the progressively responsible professional experience on a year-for-year basis.

Knowledges, Skills, and Abilities:
Thorough knowledge of the principles and practices essential to the identification, control, and reduction of air pollution.
Thorough knowledge of information sources in air pollution control.
Knowledge of the laws, rules, and regulations applicable in the air pollution control program.
Knowledge of administration, supervision, and training.
Knowledge of the major types of sources of air pollution.
Knowledge of statistical principles and procedures as applied to air pollution programs.
Knowledge of the hazards of and the safeguards essential to a program which: utilizes electrical, mechanical, and chemical equipment and hand and power tools; is performed in shops, laboratories, field installations, and industrial and commercial facilities; and may be carried on under difficult and dangerous conditions.
Skill at analyzing documents and technical reports.
Skill at developing and presenting studies and reports orally and in writing.
Skill at establishing and maintaining positive and productive relationships with associates, public and private officials, and the general public.
Ability to organize and supervise the activities of professional, administrative, and technical staff.
Ability to coordinate the air pollution control program unit with other air pollution control program units.
Ability to evaluate program unit and personnel effectiveness.
Ability to develop recommendations and to initiate unit program and personnel improvements.
Ability to represent the air pollution control program to public and private officials, the general public, and to technical and professional organizations.
Ability to work under difficult and dangerous conditions including temperature extremes, heights, and fumes where necessary.

AIR POLLUTION CONTROL

CHEMIST



AIR POLLUTION CONTROL CHEMIST

Air Pollution Control Chemist positions often are included in broad chemist classes which may cover all of a State or local government's chemist positions or those of several programs and agencies. It is generally advantageous to keep to a minimum the number of classes established so long as they adequately reflect for administrative purposes the functions performed in individual positions. These guide class specifications were developed for use by those jurisdictions where a determination is made to establish separate classes for Air Pollution Control Chemists, but the duties described may be useful in preparing job descriptions for Air Pollution Control Chemists where such positions are included in a broader class.

Another pattern of duties and minimum qualifications may be found in the joint Public Health Service and Office of State Merit Systems publication "Guide Class Specifications for State Public Health Laboratories", October 1969.

AIR POLLUTION CONTROL CHEMIST I

DEFINITION

Under close supervision, performs standardized chemical analyses of atmospheric contaminants; assists in the development of analytical procedures and measurement techniques; learns to perform more difficult analyses and to provide professional and technical advice on the chemistry of air pollution; may participate in special studies; may lead and assist in training program personnel.

EXAMPLES OF DUTIES

Performs standardized chemical laboratory and field analyses of atmospheric contaminants.

Assists higher-level staff to develop and standardize new chemical sampling and analyzing procedures.

Meets with public and private officials and assists higher-level staff in providing professional and technical advice.

Gathers, organizes, and develops basic data and information for inclusion in technical reports and studies.

Gathers and assists higher-level staff in the organization, correlation, and preparation of data and exhibits for use in hearings or court cases.

Gathers, organizes, and participates in the evaluation of data and information on the effectiveness and accuracy of air pollution control equipment and instruments and assists higher-level staff in the development of recommendations for improvement.

Prepares for more important assignments by observation, study, on-the-job training, review of reports, and participation in assignments of increasing difficulty and responsibility.

Operates, calibrates, repairs, and assists in the modification of field and laboratory equipment, facilities, and instruments.

Learns to construct special purpose equipment and develop instrumentation by observing and assisting higher-level staff.

EXAMPLES OF DUTIES

May participate in special surveys and studies in the laboratory and in the field.
May appear in hearings or in court actions as a witness.
May participate in the training of program staff and representatives of other public agencies and private organizations.
May lead lower-level employees.
May maintain a technical library resource.
Performs related duties as required.

MINIMUM QUALIFICATIONS

Education and Experience:
Graduation from an accredited college or university with a major either in chemistry or biochemistry, or a bachelor's degree in a biological science, physical science, or engineering which includes the equivalent of a minor in chemistry,
OR
Any combination of education at an accredited college, university, or junior college and progressively responsible technical or professional experience performing chemical examinations, tests, and analyses which totals four years.
OR
Four years of progressively responsible technical or professional experience performing chemical examinations, tests, and analyses.

Knowledges, Skills, and Abilities:
Knowledge of the basic principles and laboratory applications of chemistry and biochemistry.
Knowledge of information sources in chemistry and biochemistry.
Some knowledge of scientific methodology.
Some knowledge of current laboratory methods, equipment, facilities, and materials.
Some knowledge of the physical and chemical characteristics of air pollutants.
Some knowledge of the hazards of and the safeguards essential to a program which: utilizes electrical, mechanical, and chemical equipment and hand and power tools; is performed in shops, laboratories, field installations, and industrial and commercial facilities; and may be carried on under difficult and dangerous conditions.
Some skill in the care and use of laboratory equipment.
Ability to make chemical and microscopic analyses of air samples.
Ability to make and record scientific observations accurately.
Ability to analyze and evaluate documents, technical reports, formulae, and data.
Ability to understand and follow complex oral and written instructions.
Ability to perform basic mathematical calculations.
Ability to develop and present studies and reports orally and in writing.
Ability to establish and maintain positive and productive relationships with associates and other public and private individuals.
Ability to evaluate facility and equipment effectiveness.
Ability to understand and implement laws, rules and regulations.
Ability to perceive colors normally and to make olfactory distinctions.
Ability to observe safety precautions and practices.

AIR POLLUTION CONTROL CHEMIST II

DEFINITION

Under general supervision, with technical latitude, performs professional chemical analyses of atmospheric contaminants; develops analytical procedures and measurement techniques for laboratory and field activities; provides professional and technical advice; plans and conducts special studies; assists in planning the air pollution control program; leads and trains program personnel.

EXAMPLES OF DUTIES

Performs laboratory and field analyses of atmospheric contaminants utilizing wet and instrumental chemical methodology.

Develops and standardizes new chemical sampling and analyzing procedures and modifies existing procedures to meet program requirements.

Provides professional and technical advice to public and private officials on the chemistry of air pollution identification, control, and reduction.

Performs special surveys and studies including chemical sampling and analyses in the laboratory and in the field.

Prepares reports and studies for presentation to management and for publication.

Organizes and correlates chemical data and prepares exhibits and presentations for use in hearings and court cases.

Appears in hearings and court cases as an expert witness; and explains and illustrates air pollution data, equipment, instrumentation, and technical processes.

Compiles and evaluates data and information on the effectiveness and accuracy of air pollution control equipment and instruments and develops recommendations for improvement.

Trains program personnel and representatives of other public agencies and private organizations.

Operates, calibrates, repairs, and modifies as necessary field and laboratory facilities, equipment, and instruments used to chemically identify and analyze air pollutants.

Constructs special purpose equipment and develops instrumentation.

Leads, and may supervise, lower-level employees.

Initiates requests for, and makes recommendations regarding, new and additional manpower, facilities, equipment, and material.

Provides basic data for the budget.

Performs related duties as required.

MINIMUM QUALIFICATIONS

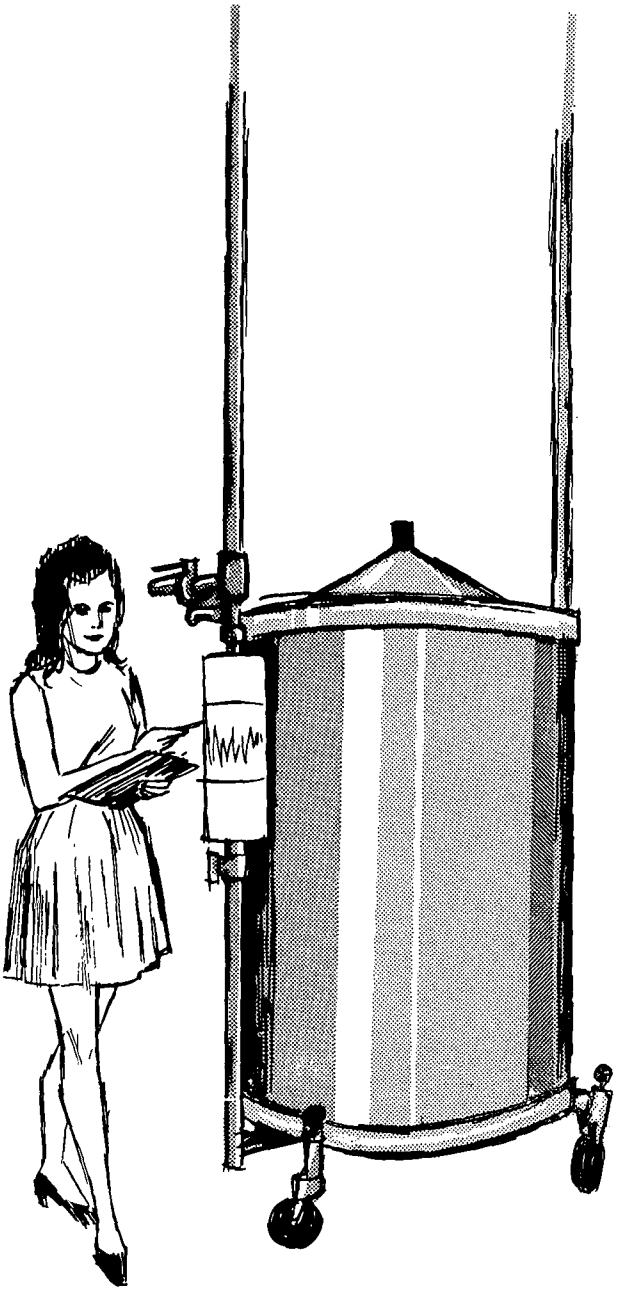
Education and Experience:
Graduation from an accredited college or university with a major either in chemistry or biochemistry, or a bachelor's degree in a biological science, physical science, or engineering which includes the equivalent of a minor in chemistry, and one year of progressively responsible professional experience performing chemical examinations, tests, and analyses,
OR
Any combination of education at an accredited college, university, or junior college and progressively responsible technical or professional experience performing chemical examinations, tests, and analyses which totals five years and includes at least one year of professional experience,
OR
Five years of progressively responsible technical or professional experience performing chemical examinations, tests, and analyses which includes at least one year of professional experience.

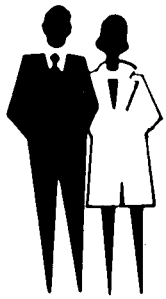
Substitution:
Successful completion of one year of full-time graduate study at an accredited college or university in chemistry, a closely related science, or a closely related field or engineering may be substituted for the professional experience.

Knowledges, Skills, and Abilities:
Thorough knowledge of the principles and laboratory applications of chemistry and biochemistry.
Thorough knowledge of information sources in chemistry and biochemistry.
Knowledge of scientific methodology.
Knowledge of current laboratory methods, equipment, facilities, and materials.
Knowledge of the physical and chemical characteristics of air pollutants.
Knowledge of the hazards of, and the safeguards essential to a program which: utilizes electrical, mechanical, and chemical equipment and hand and power tools; is performed in shops, laboratories, field installations, and industrial and commercial facilities; and may be carried on under difficult and dangerous conditions.
Some knowledge of research methods and instrumentation used in the study of air pollution.
Some knowledge of the laws, rules, and regulations applicable in the air pollution control program.
Skill at making chemical and microscopic analyses.
Skill in the care and use of laboratory equipment.
Skill at making and recording scientific observations accurately.
Skill at analyzing documents, technical reports, formulae, and data.
Skill at developing and presenting studies and reports orally and in writing.
Skill at establishing and maintaining positive and productive relationships with associates and other public and private officials.
Skill at performing mathematical calculations.
Skill at observing safety precautions and practices.
Ability to evaluate facility and equipment effectiveness.
Ability to implement and to develop recommendations concerning laws, rules, and regulations.
Ability to represent the air pollution program to public and private officials and to the general public.
Ability to interpret and implement complex oral and written instructions.
Ability to perceive colors normally and to make olfactory distinctions.

AIR POLLUTION CONTROL

ENGINEER





AIR POLLUTION CONTROL ENGINEER

Air Pollution Control Engineering positions often are included in broad engineering classes which may cover all of a State or local government's engineering positions or those of several programs and agencies. It is generally advantageous to keep to a minimum the number of classes established so long as they adequately reflect for administrative purposes the functions performed in individual positions. These guide class specifications were developed for use by those jurisdictions where a determination is made to establish separate classes for Air Pollution Control Engineers, but the duties described may be useful in preparing job descriptions for Air Pollution Control Engineers where such positions are included in a broader class.

Another pattern of duties and minimum qualifications may be found in the joint Public Health Service and Office of State Merit Systems publication "Guide Class Specifications for Selected Environmental Engineering Positions in State and Local Health Programs", March 1968.

AIR POLLUTION CONTROL ENGINEER I

DEFINITION

Under close supervision, makes beginning professional engineering analyses and evaluations of air pollution sources, problems, and permit plans; makes basic emission inventory calculations and assists in the development of emission reduction strategies; may assist in provision of professional and technical advice; may participate in special studies; may lead and assist in training program personnel; learns to perform more difficult engineering duties.

EXAMPLES OF DUTIES

Performs beginning professional engineering analyses and evaluations and assists higher-level staff in: the review of plans and specifications for air pollution control devices, systems, and operations; the examination and testing of air pollution control devices, systems, and operations, and the preparation of technical reports thereon.

Reviews, and assists higher-level staff in reviewing, plans and reports related to new construction and changes in air pollution control facilities and equipment.

Compiles air pollution data and prepares charts and graphs for the interpretation of the data with particular reference to the extent, nature, and source of atmospheric contaminants.

Drafts recommendations for the control or reduction of air pollution.

Meets with operators, managers, and owners of facilities which are actual or potential sources of air pollution and assists higher-level staff in providing engineering advice and technical assistance.

Prepares for more important assignments by observation, study, on-the-job training, review of

EXAMPLES OF DUTIES

reports and participation in assignments of increasing difficulty and responsibility.

May, for training purposes, observe and assist more skilled staff in:

- Operating and making minor adjustments to air sampling equipment;
- Collecting samples of air pollutants;
- Patrolling assigned areas to observe and record smoke, fumes, and other undesirable emissions into the atmosphere;
- Making facility and equipment inspections and carrying on complaint investigations.

May participate in the training of program staff and representatives of other public agencies and private organizations.

May participate in special surveys and studies in the office and in the field.

May appear at hearings or in court actions as a witness.

May lead lower-level employees.

May maintain a technical library resource.

Performs related duties as required.

MINIMUM QUALIFICATIONS[1]

Education and Experience:

Graduation from an accredited college or university with a major in engineering or a major in one of the physical sciences and a minor or its equivalent in engineering,

OR

Any combination of education at an accredited college, university, or junior college and progressively responsible technical or professional engineering experience in air pollution control or a related environmental program which totals four years,

OR

Four years of progressively responsible technical or professional engineering experience in air pollution control or a related environmental program.

Knowledges, Skills, and Abilities:

Knowledge of engineering principles relating to air sanitation.

Knowledge of engineering mathematics and statistical techniques.

Knowledge of information sources in air pollution control engineering.

Some knowledge of combustion processes and of elementary thermodynamics.

Some knowledge of the methods used in determining the chemical and physical characteristics of air pollutants.

Some knowledge of the hazards of and the safeguards essential to a program which: utilizes electrical, mechanical, and chemical equipment and hand and power tools; is performed in shops, laboratories, field installations, and industrial and commercial facilities; and may be carried on under difficult and dangerous conditions.

Some skill in the care and use of instruments and equipment.

Ability to analyze and evaluate engineering plans, specifications, technical reports, blueprints, and data.

Ability to understand and follow complex oral and written instructions.

Ability to perform basic mathematical calculations.

[1] A State license, certificate, or registration; or eligibility for licensing, certification, or registration as a professional engineer may be required for this class.

Knowledges, Skills, and Abilities:

Ability to develop and present technical studies and reports orally and in writing.
Ability to establish and maintain positive and productive relationships with associates and other public and private individuals.
Ability to evaluate facility and equipment effectiveness.
Ability to understand and implement laws, rules, and regulations.
Ability to observe safety precautions and practices.

AIR POLLUTION CONTROL ENGINEER II

DEFINITION

Under general supervision, with technical latitude, performs professional engineering work in an office or in the field; makes analyses and evaluations of air pollution sources, problems, and permit plans; calculates emission inventories and develops emission control and reduction strategies and emergency episode plans; provides professional and technical advice; plans and conducts special studies; assists in planning the air pollution control program; leads and trains program personnel.

EXAMPLES OF DUTIES

Analyzes and evaluates plans and specifications of air pollution control devices, systems, and operations, and prepares engineering recommendations concerning acceptability or changes needed.
Reviews field reports and compliance schedules and provides engineering analyses for agency personnel and public and private officials.
Calculates emission inventories and develops emission control and reduction strategies and emergency episode plans.
Confers with public and private officials, engineering consultants and architects, and the general public to provide engineering advice, technical assistance, and information relative to air pollution control problems.
Reviews plans and specifications of proposed air pollution control facilities and equipment for compliance with laws, rules, and regulations and recommends appropriate action.
Reviews zoning plans, air quality, meteorological and other relevant data and makes recommendations for the location and control of industrial concerns, commercial organizations, and public agencies and facilities with actual and potential air pollution problems.
Provides engineering assistance and technical advice to program staff engaged in air pollution surveillance, inspection, and investigation.
Leads, and may supervise, program personnel.
Provides engineering advice and technical assistance to employees engaged in installing, operating, calibrating, and maintaining air sampling instruments and equipment; initiates, evaluates, and makes recommendations regarding requests for maintenance services; makes recommendations regarding needs for new and additional instruments and equipment.
Trains program staff and representatives of other public agencies and private organizations in the identification, control, and reduction of air pollutants.
Appears at hearings and in court actions as an expert; and explains and illustrates air pollution data, equipment, instrumentation, and technical processes.

EXAMPLES OF DUTIES

Participates in special surveys and studies, prepares charts and graphs, and interprets data.
Analyzes data and makes recommendations as to air sampling site locations, facility types, and necessary equipment and instrumentation.
Develops, adapts, adjusts, and modifies instruments and equipment used in obtaining and analyzing air samples.
Prepares reports and studies for presentation to management and for publication.
Provides basic data for the budget.
Performs related duties as required.

MINIMUM QUALIFICATIONS[1]

Education and Experience:
Graduation from an accredited college or university with a major in engineering or a major in one of the physical sciences and a minor or its equivalent in engineering, and one year of progressively responsible professional engineering experience in air pollution control or a related environmental program,

OR

Any combination of education at an accredited college, university, or junior college and progressively responsible technical or professional engineering experience in air pollution control or a related environmental program which totals five years and includes at least one year of professional experience,

OR

Five years of progressively responsible technical or professional engineering experience in air pollution control or in a related environmental program which includes at least one year of professional experience.

Substitution:
A master's degree from an accredited college or university in engineering, a closely related science, or public or environmental health may be substituted for the professional experience.

Knowledges, Skills, and Abilities:
Thorough knowledge of engineering principles and practices of air quality conservation and of the sources, character, and effect of air pollution.
Thorough knowledge of information sources in air pollution control engineering.
Knowledge of combustion principles in terms of the control of air pollutants.
Knowledge of the physical and chemical characteristics of air pollutants.
Knowledge of the hazards of and the safeguards essential to a program which: utilizes electrical, mechanical, and chemical equipment and hand and power tools; is performed in shops, laboratories, field installations, and industrial and commercial facilities; and may be carried on under difficult and dangerous conditions.
Some knowledge of research and methods and instrumentation used in the study of air pollution.
Some knowledge of the laws, rules, and regulations applicable in the air pollution control program.
Some knowledge of the meteorological factors affecting the development and dispersal of air pollutants.
Skill at analyzing engineering plans, specifications, technical reports, blueprints, and data.

[1] A State license, certificate, or registration; or eligibility for licensing, certification, or registration as a professional engineer may be required for this class.

Knowledges, Skills, and Abilities:

Skill in the care and use of air sampling instruments and equipment.

Skill at developing and presenting technical studies and reports orally and in writing.

Skill at establishing and maintaining positive and productive relationships with associates and other public and private officials.

Skill at performing mathematical calculations.

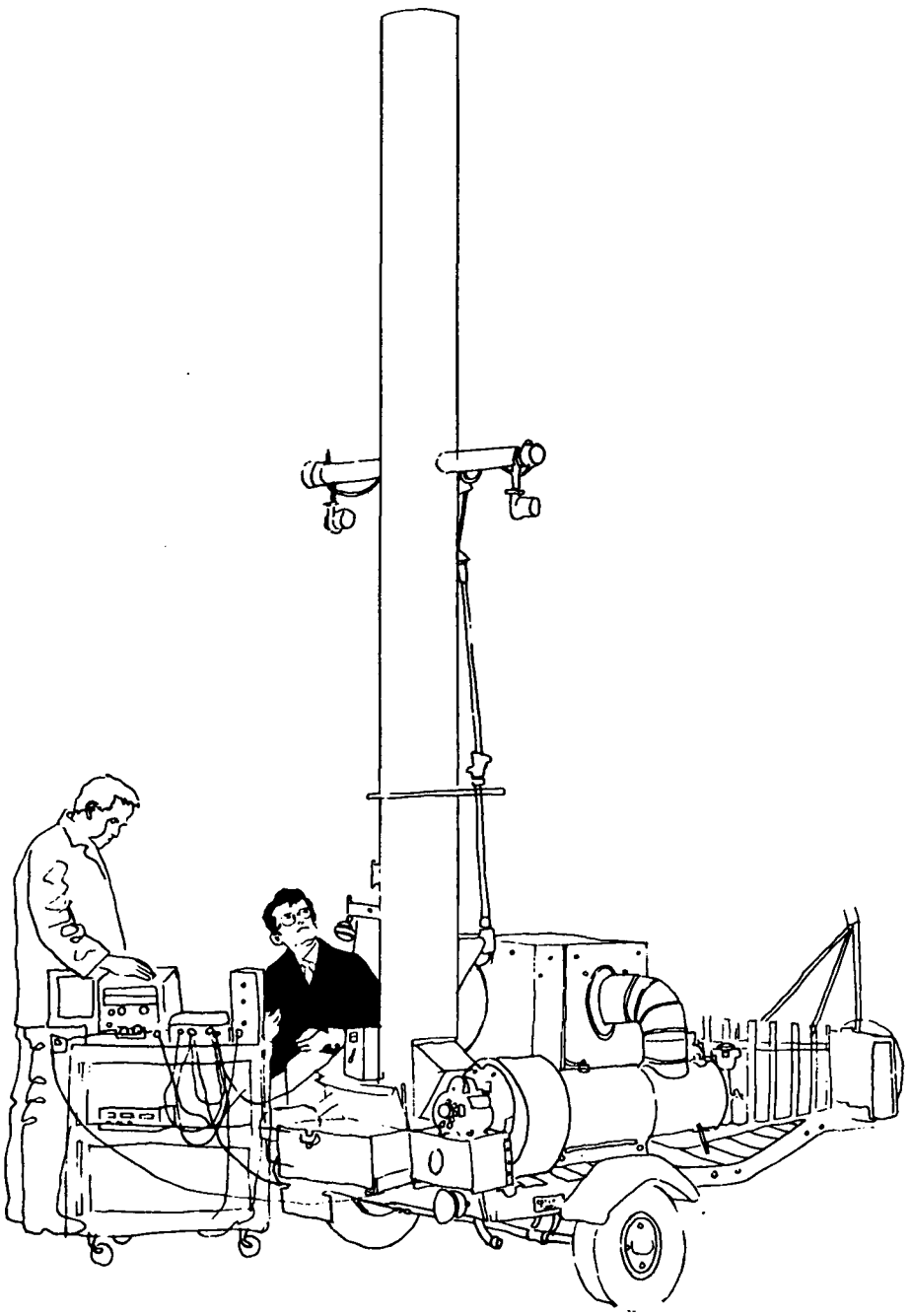
Skill at observing safety precautions and practices.

Ability to evaluate facility and equipment effectiveness.

Ability to implement and to develop recommendations concerning laws, rules, and regulations.

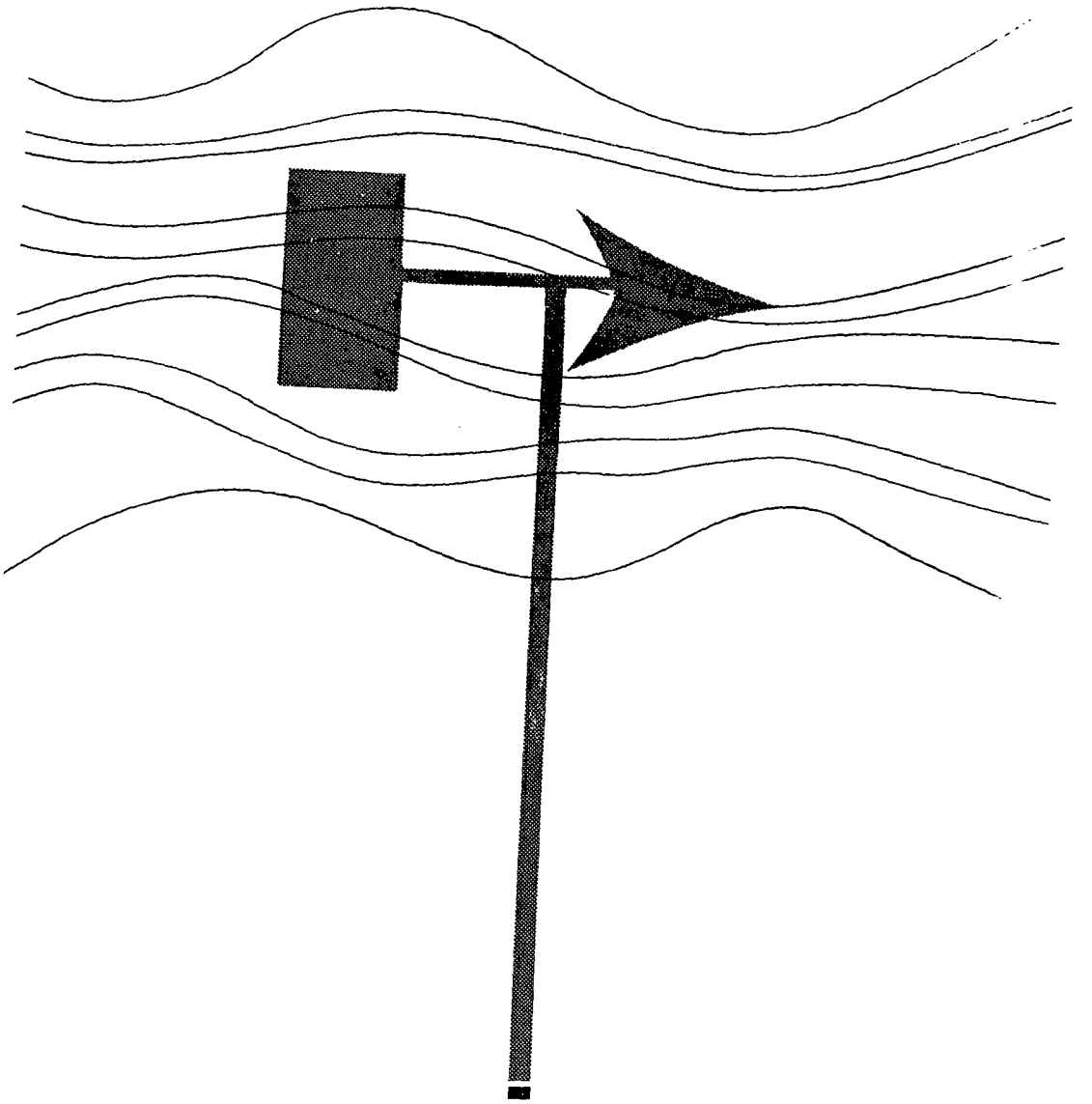
Ability to represent the air pollution program to public and private officials and to the general public.

Ability to interpret and implement complex oral and written instructions.



AIR POLLUTION CONTROL

METEOROLOGIST



AIR POLLUTION CONTROL METEOROLOGIST I

DEFINITION

Under close supervision, performs beginning professional meteorological analyses and evaluations of meteorological and air pollution data; assists in the relation of meteorological elements to air pollution problems and preparation of periodic air quality forecasts; may assist in provision of professional and technical advice; may participate in special studies; may lead and assist in the training of program personnel; learns to perform more difficult meteorological duties.

EXAMPLES OF DUTIES

Collects from air monitoring stations and from local, State, and Federal sources meteorological data such as wind velocity and direction, lapse rates, air pressure, temperature, and humidity, and data concerning types and concentrations of air pollutants.

Operates, calibrates, and maintains specialized scientific equipment in meteorological (air monitoring) stations in an assigned area.

Correlates meteorological data with concentrations of air pollutants or the diffusion of contaminants in the atmosphere; and prepares charts and diagrams showing the relationships.

Assists higher-level staff in the preparation of meteorological reports, studies, and recommendations.

Provides routine air pollution and forecast information to the public and to officials of public agencies and private organizations in response to inquiries.

Prepares for more important assignments by observation, study, on-the-job training, review of reports, and participation in assignments of increasing difficulty and responsibility.

May participate in special surveys and studies.

May appear at hearings or in court actions as a witness.

May participate in the training of program staff and representatives of other public agencies and private organizations.

May lead lower-level employees.

May maintain a technical library resource.

Performs related duties as required.

MINIMUM QUALIFICATIONS

Education and Experience:
Graduation from an accredited college or university with a major in meteorology or a major in the natural or physical sciences and a minor or its equivalent in meteorology or the atmospheric sciences,
OR
Any combination of education at an accredited college, university, or junior college and progressively responsible technical or professional meteorological experience which totals four years,
OR
Four years of progressively responsible technical or professional meteorological experience.

Knowledges, Skills, and Abilities:
Knowledge of the fundamental physical and mathematical sciences underlying the science of meteorology.
Knowledge of meteorology with emphasis on the relationship of conditions of the atmosphere to air pollution.
Some knowledge of scientific methodology.
Some knowledge of standard meteorological equipment and the method of applying it to meteorological studies.
Some knowledge of statistical principles and procedures.
Some knowledge of the hazards of and the safeguards essential to a program which: utilizes electrical, mechanical, and chemical equipment and hand and power tools; is performed in shops, laboratories, field installations, and industrial and commercial facilities; and may be carried on under difficult and dangerous conditions.
Some knowledge of information sources in meteorology.
Some skill in the care and use of meteorological equipment.
Ability to analyze and evaluate documents, technical reports, and data.
Ability to make and record scientific observations accurately.
Ability to operate and maintain a variety of meteorological measuring instruments.
Ability to develop and present studies and reports orally and in writing.
Ability to establish and maintain positive and productive relationships with associates and other public and private individuals.
Ability to evaluate facility and equipment effectiveness.
Ability to perform mathematical calculations.
Ability to understand and implement laws, rules, and regulations.
Ability to interpret and implement complex oral and written instructions.
Ability to observe safety precautions and practices.

AIR POLLUTION CONTROL METEOROLOGIST II

DEFINITION

Under general supervision, with technical latitude, makes professional meteorological analyses and evaluations of meteorological and air pollution data; relates meteorological elements to air pollution problems in control models; prepares periodic air quality forecasts; recommends implementation and termination of emergency episode plans; provides professional and technical advice; plans and conducts special studies; assists in planning the air pollution control program; leads and trains program personnel.

EXAMPLES OF DUTIES

Plans and conducts meteorological studies using statistical design and air sampling technology.
Operates and supervises the operation of specialized scientific equipment in meteorological observation stations.
Calculates effects of different emission levels using inventories of emission sources, meteorological and topographical data, and population.
Analyzes and evaluates climatological factors in making short-range detailed forecasts of expected air pollution and in forecasting long-range seasonal and annual variations in air pollution measurements.
Advises air pollution control program staff regarding meteorological conditions affecting pollutant measurement and air pollution surveillance.
Conducts and coordinates studies relating meteorological phenomena to the occurrence of airborne wastes in order to devise new, and to refine existing, forecasting techniques regarding air quality trends.
Participates in research projects related to air resource management and land use involving such items as industrial zoning, trends in growth and concentration of industry and population, and public reaction to air pollution standards.
Maintains records of levels of air pollution and meteorological data and advises program officials when appropriate to declare an air pollution emergency episode.
Appears at hearings and in court actions as an expert; and explains and illustrates air pollution data, equipment, instrumentation, and technical processes.
Performs special surveys and studies.
Analyzes data and makes recommendations as to air monitoring site locations, facility type, and necessary equipment and instrumentation.
Develops, adapts, adjusts, and modifies instruments and equipment used in obtaining air samples.
Prepares reports and studies for presentation to management and for publication.
Leads, and may supervise, lower-level employees.
Provides basic data for the budget.
Performs related duties as required.

MINIMUM QUALIFICATIONS

Education and Experience:
Graduation from an accredited college or university with a major in meteorology or a major in the natural or physical sciences and a minor or its equivalent in meteorology or the atmospheric sciences, and one year of progressively responsible professional meteorological experience in air pollution control or a related environmental program,

OR

Any combination of education at an accredited college, university, or junior college and progressively responsible technical or professional meteorological experience which totals five years and includes at least one year of professional experience in air pollution control or a related environmental program,

OR

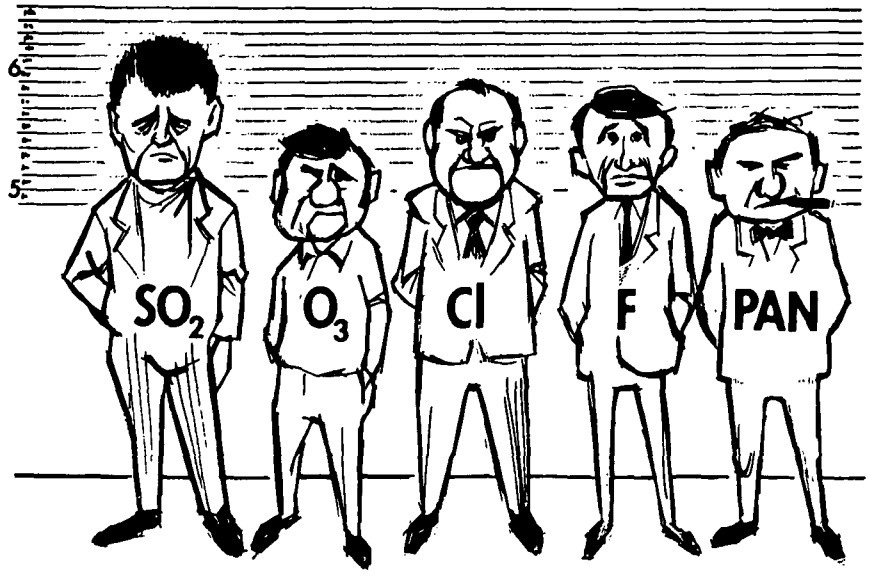
Five years of progressively responsible technical or professional meteorological experience which includes at least one year of professional experience in air pollution control or a related environmental program.

Substitution:
Successful graduate study in engineering, science, public health, or a related environmental field may be substituted for the professional experience.

Knowledges, Skills, and Abilities:
Thorough knowledge of meteorology with emphasis on the relationship of conditions of the atmosphere to air pollution.
Thorough knowledge of surface and upper air analysis techniques, precipitation forecasting principles, and their application to air pollution control.
Thorough knowledge of information sources in meteorology.
Knowledge of standard meteorological equipment and the methods of applying it to meteorological studies.
Knowledge of air pollution control measures and procedures.
Knowledge of the hazards of and the safeguards essential to a program which: utilizes electrical, mechanical, and chemical equipment and hand and power tools; is performed in shops, laboratories, field installations, and industrial and commercial facilities, and may be carried on under difficult and dangerous conditions.
Knowledge of scientific methodology.
Some knowledge of the laws, rules, and regulations applicable in the air pollution control program.
Some knowledge of electronic data processing techniques.
Skill in the care and use of meteorological equipment.
Skill at analyzing documents, technical reports, and data.
Skill at making and recording scientific observations accurately.
Skill at developing and presenting studies and reports orally and in writing.
Skill at establishing and maintaining positive and productive relationships with associates and other public and private officials.
Skill at performing mathematical calculations.
Skill at observing safety precautions and practices.
Ability to evaluate facility and equipment effectiveness.
Ability to implement and to develop recommendations concerning laws, rules and regulations.
Ability to represent the air pollution program to public and private officials and to the general public.
Ability to interpret and implement complex oral and written instructions.

AIR POLLUTION CONTROL

SPECIALIST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AIR POLLUTION CONTROL SPECIALIST I

DEFINITION

Under close supervision, makes beginning professional-level analyses and evaluations of air pollution sources, problems, and permit plans; assists in complex surveillance, inspections, and investigations; assists in the development of recommendations and in the conduct of negotiations for improvement or modification of air pollutant conditions, initiation of enforcement actions, and provision of professional and technical advice; may participate in special studies, may lead and assist in the training of program personnel; learns to perform more difficult professional-level duties.

EXAMPLES OF DUTIES

Gathers and organizes information and data on air pollution sources and emissions and on the effectiveness of program facilities, equipment, instrumentation, and technical processes; and assists higher-level staff in analyzing and evaluating the information and data and in developing recommendations for improving the air pollution control program.

Assists higher-level staff performing complex surveillance, inspections, and investigations.

Assists higher-level staff in evaluating requests for new and renewal operation and construction permits by checking public records, reviewing plans and drawings, inspecting facilities and equipment, and making reports and developing recommendations.

Reinspects public and private facilities and equipment to determine if air pollution operation and construction permit requirements are being met.

Gathers and organizes for presentation basic data on violations of air pollution laws, rules, and regulations and participates with higher-level staff in evaluating and developing recommendations related to the violations.

Meets with public and private officials and assists higher-level staff in conducting negotiations and providing professional and technical advice.

Discusses air pollution control with operators, managers, and owners of facilities which are actual or potential sources of air pollution and seeks to secure voluntary compliance with air pollution laws, rules, and regulations.

Prepares for more responsible assignments by observation, study, on-the-job training, review of reports, and participation in assignments of increasing difficulty.

May participate in special surveys and studies.

May appear at hearings or in court actions as a witness.

May participate in the training or program staff and representatives of other public agencies and private organizations.

May lead lower-level employees.

May maintain a technical library resource.

Performs related duties as required.

MINIMUM QUALIFICATIONS

Education and Experience:
Graduation from an accredited college or university with a minor or its equivalent in engineering, chemistry, or the physical or biological sciences,
OR
Any combination of education at an accredited college, university, or junior college and progressively responsible technical or professional experience in air pollution control or a related environmental program which totals four years,
OR
Four years of progressively responsible technical or professional experience in air pollution control or a related environmental program.

Knowledges, Skills, and Abilities:
Some knowledge of the major types of sources of air pollution.
Some knowledge of basic statistical principles and procedures as applied in air pollution control programs.
Some knowledge of information sources in air pollution control.
Some knowledge of the hazards of and the safeguards essential to a program which: utilizes electrical, mechanical, and chemical equipment and hand and power tools; is performed in shops, laboratories, field installations, and industrial and commercial facilities; and may be carried on under difficult and dangerous conditions.
Some skill in the care and use of instruments.
Ability to analyze and evaluate documents, technical reports, and data.
Ability to develop and present studies and reports.
Ability to establish and maintain positive and productive relationships with fellow workers, superiors, and other public and private individuals.
Ability to evaluate facility and equipment effectiveness.
Ability to perform basic mathematical calculations.
Ability to understand and implement laws, rules, and regulations.
Ability to understand and follow complex oral and written instructions.
Ability to work under difficult and dangerous conditions including temperature extremes, heights, and fumes.
Ability to observe safety precautions and practices.

AIR POLLUTION CONTROL SPECIALIST II

DEFINITION

Under general supervision, with technical latitude, functions as a professional-level program representative; conducts complex inspections and investigations of reported violations; analyzes and evaluates air pollution sources, problems, and permit plans; develops recommendations and negotiates improvements or corrective actions; initiates enforcement actions; provides professional and technical advice; plans and conducts special studies; assists in planning the air pollution control program; leads and trains program personnel.

EXAMPLES OF DUTIES

Represents the air pollution control program in discussions and meetings with public and private officials involving the identification, control, and reduction of air pollutants.

Negotiates with operators, managers, and owners of facilities which are actual or potential sources of air pollution to secure voluntary correction or improvement of the pollutant condition; provides technical advice and makes recommendations regarding facilities, equipment, and processes; and issues warnings of possible legal action.

Performs complex or difficult field surveillance, facility and equipment inspection and reinspection, and complaint investigation.

Analyzes and evaluates new or amended laws, rules, and regulations; data on air pollution sources and emissions; and the effectiveness of program facilities, equipment, instrumentation, and technical processes and develops recommendations for improving the air pollution control program.

Analyzes and evaluates requests for new and renewal permits for the construction and operation of pollutant-emitting facilities and equipment and makes recommendations regarding action on the requests.

Gathers, correlates, and evaluates data on violations of air pollution laws, rules, and regulations and provides program management with recommendations on the initiation of legal action.

Implements emergency episode procedures.

Provides technical assistance to employees engaged in installing, operating, calibrating, and performing field maintenance on air sampling instruments and equipment; initiates, evaluates, and makes recommendations regarding requests for maintenance services; makes recommendations regarding needs for new and additional instruments and equipment.

Trains program staff and representatives of other public agencies and private organizations in the identification, control, and reduction of air pollutants.

Appears at hearings and in court actions as an expert; and explains and illustrates air pollution data, equipment, instrumentation, and technical processes.

Performs special surveys and studies.

Analyzes data and makes recommendations as to air sampling site locations, facility type, and necessary equipment and instrumentation.

Prepares reports and studies for presentation to management and for publication.

Leads, and may supervise, lower-level employees.

Provides basic data for the budget.

Performs related duties as required.

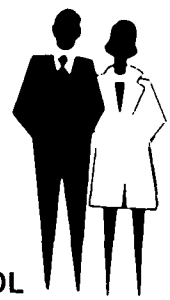
MINIMUM QUALIFICATIONS

Education and Experience:
Graduation from an accredited college or university with a minor or its equivalent in engineering, chemistry, or the physical or biological sciences, and one year of progressively responsible professional experience in air pollution control or a related environmental program,

OR
Any combination of education at an accredited college, university, or junior college and progressively responsible technical or professional experience in air pollution control or a related environmental program which totals five years and includes at least one year of professional experience,
OR
Five years of progressively responsible technical or professional experience in air pollution control or a related environmental program which includes at least one year of professional experience.

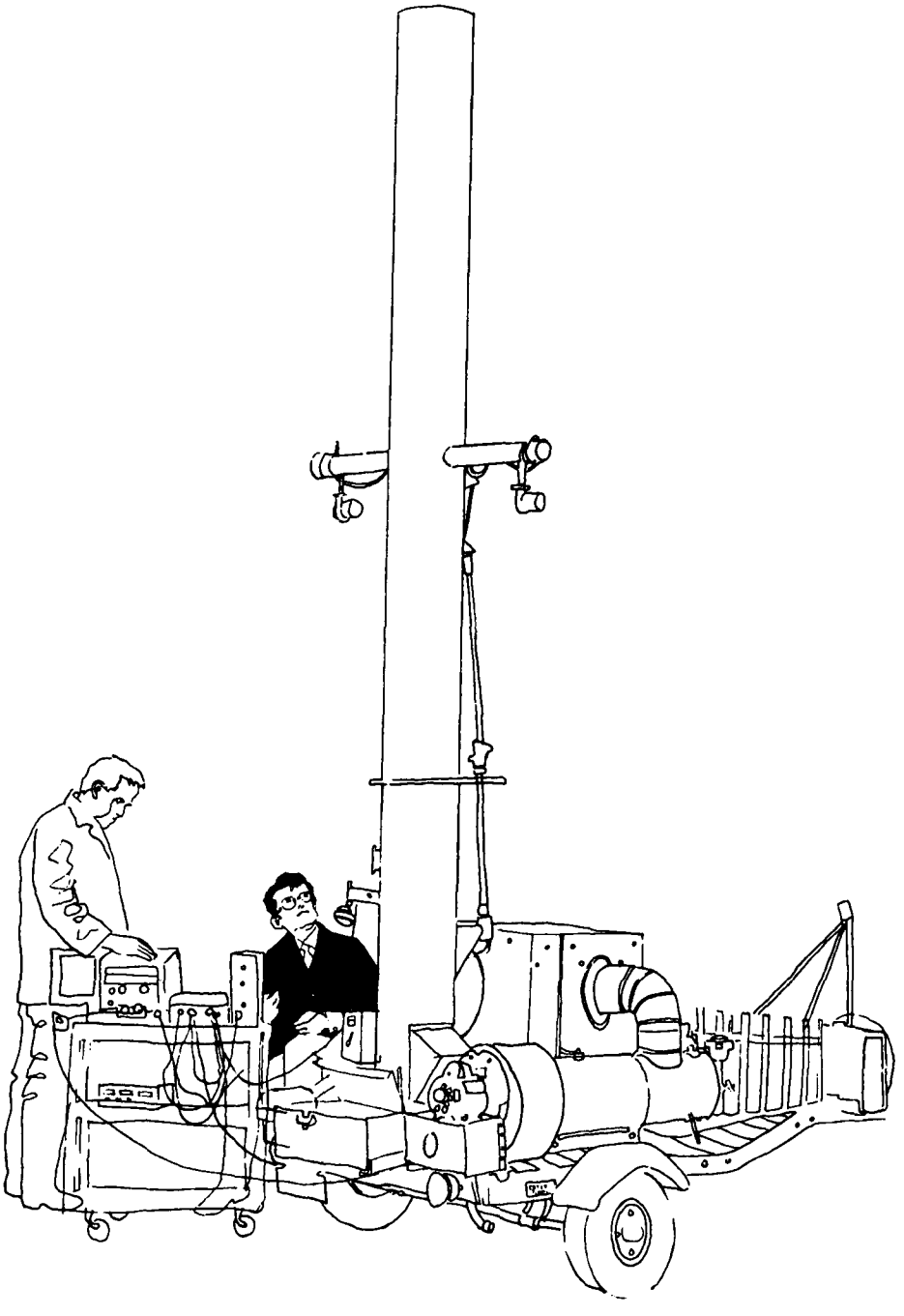
Substitution:
Successful graduate study in engineering, science, public health or administration, or a related environmental field may be substituted for the professional experience.

Knowledges, Skills, and Abilities:
Knowledge of the principles and practices essential to the identification, control and reduction of air pollution.
Knowledge of the hazards of and the safeguards essential to a program which: utilizes electrical, chemical, and mechanical equipment and hand and power tools; is performed in shops, laboratories, field installations, and industrial and commercial facilities; and may be carried on under difficult and dangerous conditions.
Knowledge of information sources in air pollution control.
Knowledge of the major types of sources of air pollution.
Some knowledge of the laws, rules, and regulations applicable in the air pollution control program.
Some knowledge of statistical principles and procedures as applied in air pollution programs.
Skill at analyzing documents, technical reports, and data.
Skill at developing and presenting studies and reports orally and in writing.
Skill at establishing and maintaining positive relations with associates and other public and private individuals.
Skill at performing basic mathematical calculations.
Skill at observing safety precautions and practices.
Ability to evaluate facility and equipment effectiveness.
Ability to develop recommendations concerning and to implement laws, rules, and regulations.
Ability to represent the air pollution control program to public and private officials and the general public.
Ability to work under difficult and dangerous conditions including temperature extremes, heights, and fumes.
Ability to interpret and implement complex oral and written instructions.



AIR POLLUTION CONTROL

INSPECTOR



AIR POLLUTION CONTROL INSPECTOR I (TRAINEE)

DEFINITION

Under close supervision, following detailed directions, performs routine field surveillance, facility and equipment inspection, and complaint investigation and learns to perform more responsible tasks by observing and assisting higher-level staff and participating in training.

EXAMPLES OF DUTIES

Performs routine field surveillance, noting air pollution sources and reporting locations, and observes and assists higher-level staff on complex field surveillance.
Performs routine facility and equipment inspection, reports findings, and observes and assists higher-level staff on complex inspection.
Performs initial complaint investigation of a routine nature, reporting on situational observations and on the statements of complainants and other involved parties, and observes and assists higher-level staff on complex complaint investigation.
Maintains daily records and logs and makes oral and written reports on activities.
Operates vehicles used in field work.
Prepares for higher-level tasks by reading journals, articles, and releases on air pollution control and through participating in training.
Performs related duties as required.

MINIMUM QUALIFICATIONS

Education and Experience:

Graduation from high school or the possession of a certificate of high school graduation equivalency,

OR

Three years experience in air pollution control or a related environmental program.

Knowledges, Skills, and Abilities:

Some knowledge of basic chemical, electrical, and mechanical principles.
Ability to understand air pollution control rules and regulations.
Ability to discuss air pollution control problems with fellow workers, superiors, and other public and private individuals.
Ability to maintain positive and productive relationships with associates and other public and private individuals.
Ability to perform arithmetic computations.
Ability to understand and carry out verbal and written directions.
Ability to understand and apply safety precautions.
Ability to work under difficult and dangerous conditions including temperature extremes, heights, and fumes.
Ability to maintain technical and administrative records.
Ability to operate vehicles used for field work.

AIR POLLUTION CONTROL INSPECTOR II

DEFINITION

Under supervision, following general technical directions, performs field surveillance, facility and equipment inspection, and complaint investigation; may assist professional staff conducting special studies; and may lead and assist in the training of lower-level staff.

EXAMPLES OF DUTIES

Performs field surveillance of air pollution and documents the sources, quantity, and density of the air pollution.

Performs facility and equipment inspection, noting level of operational effectiveness of air pollution control devices, recording observations and data, and reporting on inspection findings; may make recommendations for corrective actions.

Investigates complaints through observing air pollution conditions, interviewing complainants and owners and operators of allegedly-polluting equipment and facilities, and inspecting equipment and facility operations.

Develops detailed reports on complaint investigations together with recommendations as to corrective actions needed.

Prepares oral and written reports of activities.

Provides assistance to, and may make work assignments to and lead, lower-level employees.

Operates, and performs the daily maintenance on, vehicles used for field work.

Maintains an effective relationship with representatives of public and private agencies and organizations.

Maintains and improves personal level of technical competence through reading and training.

May attend air pollution control hearings to present data and may be called as a witness in court cases.

May work independently on specialized assignments.

May assist professional staff in conducting special studies.

May assist in the training of lower-level employees.

Performs related duties as required.

AIR POLLUTION CONTROL INSPECTOR I (TRAINEE)

DEFINITION

Under close supervision, following detailed directions, performs routine field surveillance, facility and equipment inspection, and complaint investigation and learns to perform more responsible tasks by observing and assisting higher-level staff and participating in training.

EXAMPLES OF DUTIES

Performs routine field surveillance, noting air pollution sources and reporting locations, and observes and assists higher-level staff on complex field surveillance.
Performs routine facility and equipment inspection, reports findings, and observes and assists higher-level staff on complex inspection.
Performs initial complaint investigation of a routine nature, reporting on situational observations and on the statements of complainants and other involved parties, and observes and assists higher-level staff on complex complaint investigation.
Maintains daily records and logs and makes oral and written reports on activities.
Operates vehicles used in field work.
Prepares for higher-level tasks by reading journals, articles, and releases on air pollution control and through participating in training.
Performs related duties as required.

MINIMUM QUALIFICATIONS

Education and Experience:
Graduation from high school or the possession of a certificate of high school graduation equivalency,
OR
Three years experience in air pollution control or a related environmental program.

Knowledges, Skills, and Abilities:
Some knowledge of basic chemical, electrical, and mechanical principles.
Ability to understand air pollution control rules and regulations.
Ability to discuss air pollution control problems with fellow workers, superiors, and other public and private individuals.
Ability to maintain positive and productive relationships with associates and other public and private individuals.
Ability to perform arithmetic computations.
Ability to understand and carry out verbal and written directions.
Ability to understand and apply safety precautions.
Ability to work under difficult and dangerous conditions including temperature extremes, heights, and fumes.
Ability to maintain technical and administrative records.
Ability to operate vehicles used for field work.

AIR POLLUTION CONTROL INSPECTOR II

DEFINITION

Under supervision, following general technical directions, performs field surveillance, facility and equipment inspection, and complaint investigation; may assist professional staff conducting special studies; and may lead and assist in the training of lower-level staff.

EXAMPLES OF DUTIES

Performs field surveillance of air pollution and documents the sources, quantity, and density of the air pollution.

Performs facility and equipment inspection, noting level of operational effectiveness of air pollution control devices, recording observations and data, and reporting on inspection findings; may make recommendations for corrective actions.

Investigates complaints through observing air pollution conditions, interviewing complainants and owners and operators of allegedly-polluting equipment and facilities, and inspecting equipment and facility operations.

Develops detailed reports on complaint investigations together with recommendations as to corrective actions needed.

Prepares oral and written reports of activities.

Provides assistance to, and may make work assignments to and lead, lower-level employees.

Operates, and performs the daily maintenance on, vehicles used for field work.

Maintains an effective relationship with representatives of public and private agencies and organizations.

Maintains and improves personal level of technical competence through reading and training.

May attend air pollution control hearings to present data and may be called as a witness in court cases.

May work independently on specialized assignments.

May assist professional staff in conducting special studies.

May assist in the training of lower-level employees.

Performs related duties as required.

MINIMUM QUALIFICATIONS

Education and Experience:
Graduation from an accredited junior college,
OR
Graduation from high school or the possession of a certificate of high school graduation equivalency and at least one year of progressively responsible experience in air pollution control or a related environmental program assisting in field surveillance, facility and equipment inspection, and complaint investigation,
OR
Four years of progressively responsible experience in air pollution control or a related environmental program which includes at least one year assisting in field surveillance, facility, and equipment inspection, and complaint investigation.

Knowledges, Skills, and Abilities:
Some knowledge of the principles of operation of air sampling instruments and equipment.
Some knowledge of technical terminology in air pollution and related environmental fields.
Some knowledge of the hazards of and the safeguards essential to using electrical, mechanical, and chemical equipment and hand and power tools.
Skill at performing arithmetic computations.
Ability to operate air sampling instruments and equipment.
Ability to understand and interpret air pollution control laws, rules, and regulations.
Ability to discuss air pollution control problems with fellow workers, superiors, and other public and private individuals.
Ability to maintain positive and productive relationships with associates and other public and private individuals.
Ability to maintain technical and administrative records.
Ability to work under difficult and dangerous conditions including temperature extremes, heights, and fumes.
Ability to operate vehicles used for field work.
Ability to learn to:

- Work independently on specialized assignments;
- Evaluate technical processes and procedures and to develop recommendations for improvement;
- Communicate orally effectively;
- Assist higher-level staff engaged in training activities.

AIR POLLUTION CONTROL INSPECTOR III

DEFINITION

Under general supervision, with technical latitude, performs field surveillance, facility and equipment inspection, and complaint investigation; assists professional staff conducting special studies; and leads and trains lower-level staff.

EXAMPLES OF DUTIES

Performs field surveillance, facility and equipment inspection, and complaint investigation.
Works independently on specialized assignments.
Develops and presents recommendations as to new or different air pollution control processes and procedures.
Maintains files on daily activities including records of surveillances, investigations, and inspections.
Develops and presents oral and written reports together with recommendations.
Leads, and may supervise, lower-level employees.
Attends air pollution control hearings, presents evidence and data, and testifies as a witness in court cases.
Assists in the training of lower-level employees and other personnel.
Assists professional staff conducting special studies.
Maintains and promotes effective personal relationships with public and private officials, agencies, and organizations.
Discusses air pollution — its causes, impact, and control — with public and private officials, agencies, and organizations in the course of field activities.
Operates, is responsible for the daily maintenance of, and initiates requests for repair and maintenance of vehicles used for field work.
May make recommendations regarding new and additional equipment.
Performs related duties as required.

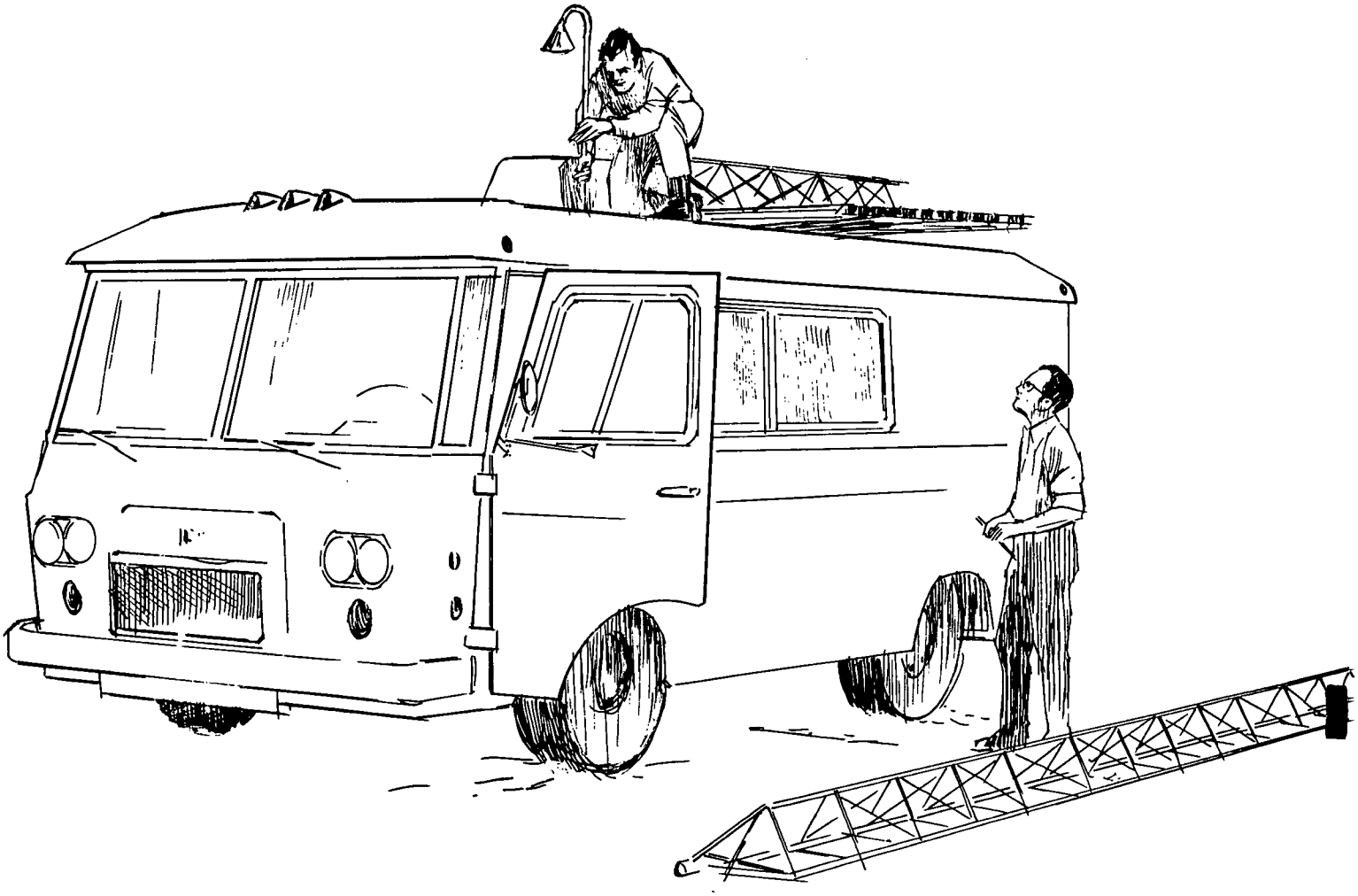
MINIMUM QUALIFICATIONS

Education and Experience:
Graduation from an accredited junior college and one year of progressively responsible experience in air pollution control or a related environmental program performing field surveillance, facility and equipment inspection, and complaint investigation,
OR
Graduation from high school or the possession of a certificate of high school graduation equivalency and at least two years of progressively responsible experience in air pollution control or a related environmental program performing field surveillance, facility and equipment inspection, and complaint investigation,
OR
Five years of progressively responsible experience in air pollution control or a related environmental program which includes at least two years performing field surveillance, facility and equipment inspection, and complaint investigation.

Knowledges, Skills, and Abilities:
Knowledge of the principles of operation of air sampling instruments and equipment.
Knowledge of technical terminology in air pollution and related environmental fields.
Knowledge of the hazards of and the safeguards essential to using electrical, mechanical, and chemical equipment and hand and power tools.
Knowledge of air pollution control laws, rules, and regulations which affect field surveillance, facility and equipment inspection, and complaint investigation.
Some knowledge of administrative principles and practices.
Some knowledge of training principles.
Some knowledge of basic principles of leadership and supervision.
Skill at performing surveillance, inspection, and investigation activities.
Skill at operating air sampling instruments and equipment.
Skill in maintaining positive and productive relationships with associates and other public and private individuals.
Skill at performing arithmetic computations.
Skill at communicating orally.
Ability to evaluate technical processes and procedures and to develop recommendations for improvement.
Ability to analyze documents, reports, and plans.
Ability to discuss air pollution control problems with fellow workers, superiors, and other public and private individuals.
Ability to present evidence and data and to testify as a witness in court cases.
Ability to work independently on specialized assignments.
Ability to assist higher-level staff engaged in training activities.
Ability to work under difficult and dangerous conditions including temperature extremes, heights, and fumes.
Ability to maintain technical and administrative records.
Ability to operate vehicles used for field work.

AIR POLLUTION CONTROL

TECHNICIAN



AIR POLLUTION CONTROL TECHNICIAN I (TRAINEE)

DEFINITION

Under close supervision, following detailed directions, performs routine technical tasks in the laboratory, field, and shop; assists higher-level staff installing, operating, calibrating, modifying, maintaining, and repairing a variety of equipment and instruments used in the air pollution control program; and participates in training.

EXAMPLES OF DUTIES

Performs routine technical tasks in support of higher-level staff in the laboratory, field, and shop.
Observes and assists higher-level staff in laboratory, field, and shop:

- Installing, operating, calibrating, modifying, maintaining, and repairing air sampling, meteorological, and laboratory equipment and instruments;
- Measuring, testing, and analyzing air pollutants;
- Stack sampling;
- Source and emission inventorying;
- Recording, tabulating, charting, and graphing data;
- Fabricating field shelters for equipment;
- Keeping files and records on activities;
- Operating and maintaining field vehicles.

Drives, loads, and unloads vehicles used in field work.
Performs related duties as required.
Prepares for higher-level technical tasks by reading journals, articles, and releases on air pollution control and through participation in technical training.

MINIMUM QUALIFICATIONS

Education and Experience:
Graduation from high school or the possession of a certificate of high school graduation equivalency,
OR
Three years of experience in air pollution control or a related environmental program.

AIR POLLUTION CONTROL TECHNICIAN I (TRAINEE)

Knowledges, Skills, and Abilities:

Some knowledge of basic chemical, electrical, and mechanical principles.
Some knowledge of the kinds and uses of hand and power tools.
Ability to operate and perform routine field maintenance of air sampling equipment and instruments.
Ability to discuss technical problems with fellow workers, superiors, and other public and private individuals.
Ability to maintain positive and productive relationships with associates and other public and private individuals.
Ability to perform arithmetic computations.
Ability to understand air pollution control laws, rules, and regulations.
Ability to understand and carry out verbal and written directions.
Ability to maintain technical and administrative records.
Ability to work under difficult and dangerous conditions including temperature extremes, heights, and fumes.
Ability to understand and apply safety precautions.
Ability to operate vehicles used for field work.

AIR POLLUTION CONTROL TECHNICIAN II

DEFINITION

Under supervision, following general directions, installs, operates, calibrates, modifies, maintains, and repairs a variety of equipment and instruments used in the air pollution control program; and may lead and assist professional staff conducting special studies; and may lead and assist in the training of lower-level staff.

EXAMPLES OF DUTIES

Installs, operates, calibrates, modifies, maintains, and repairs air sampling equipment.
Conducts stack sampling activities and gathers data for source and emission inventories.
Performs routine tests and measurements including standardized analyses of air pollutants.
Records, tabulates, charts and graphs data obtained from air sampling equipment, meteorological instruments, and laboratory analyses.
Assists higher-level staff designing or modifying instruments and equipment.
Fabricates field shelters and facilities and assists in the placement of air sampling and meteorological instruments and equipment.
Assists higher-level staff reviewing and evaluating engineering proposals and drawings for new and modified industrial processes and facilities as actual or potential sources of air pollution.
Assists higher-level staff conducting the more complex tests, measurements, and analyses.
Prepares oral and written reports of activities.
Provides technical assistance to, and may make work assignments to and lead, lower-level employees.
Operates, and is responsible for the daily maintenance on, vehicles used for field work.
Maintains an effective relationship with representatives of public and private agencies and organizations.
Maintains and improves personal level of technical competence through reading and training.
May work independently on specialized assignments.

EXAMPLES OF DUTIES

May assist professional staff conducting special studies.
May attend air pollution control hearings to present data and may be called as a witness in court cases.
May assist in the training of lower-level employees.
Performs related duties as required.

MINIMUM QUALIFICATIONS

Education and Experience:

Graduation from an accredited junior college with at least 12 semester hours in engineering, chemistry, or the physical or biological sciences,

OR

Graduation from high school or the possession of a certificate of high school graduation equivalency and at least one year of progressively responsible experience in air pollution control or a related environmental or other program assisting in the installation, operation, calibration, modification, maintenance, and repair of equipment and instruments,

OR

Four years of progressively responsible experience in air pollution control or a related environmental or other program which includes at least one year assisting in the installation, operation, calibration, modification, maintenance, and repair of equipment and instruments.

Knowledges, Skills, and Abilities:

Knowledge of technical terminology in air pollution and related environmental fields.
Knowledge of basic chemical, electrical, and mechanical principles.
Knowledge of the kinds and uses of hand and power tools.
Some knowledge of the basic technical practices and standized procedures utilized in stack sampling and source and emission inventorying.
Some knowledge of the principles of operation and repair of air sampling instruments and equipment.
Skill at performing arithmetic computations.
Some knowledge of the hazards of and the safeguards essential to using chemical, electrical, and mechanical equipment and hand and power tools.
Ability to operate and repair air sampling instruments and equipment.
Ability to discuss technical problems with fellow workers, superiors, and other public and private individuals.
Ability to maintain positive and productive relationships with associates and other public and private individuals.
Ability to understand and interpret air pollution control laws, rules, and regulations.
Ability to work under difficult and dangerous conditions including temperature extremes, heights, and fumes.
Ability to maintain technical and administrative records.
Ability to operate vehicles used for field work.
Ability to learn to:

- Work independently on specialized assignments;
- Evaluate technical processes and procedures and to make recommendations for improvement;
- Assist higher-level staff engaged in training activities.

AIR POLLUTION CONTROL TECHNICIAN III

DEFINITION

Under general supervision, with technical latitude, performs a broad range of technical duties of varying complexity in laboratory, shop, and field; assists professional staff conducting special studies; and leads and trains lower-level staff.

EXAMPLES OF DUTIES

Performs complex installations, operations, calibration, maintenance, and repair of air sampling equipment.
Performs stack sampling and the gathering of data for source and emission inventories.
Performs complex tests, measurements, and analyses of air pollutants using standardized procedures.
Fabricates field shelters and facilities for air sampling equipment.
Sites and places air sampling and meteorological instruments and equipment as directed.
Assists in the review of engineering proposals and drawings for new or modified industrial processes and facilities and may develop recommendations.
Works independently on specialized assignments.
Leads, and may supervise, lower-level employees.
Prepares oral and written reports of activities and makes recommendations.
Assists in the training of lower-level employees and other personnel.
Assists professional staff conducting special studies.
Attends air pollution control hearings, presents evidence and data, and testifies as a witness in court cases.
Maintains and promotes effective personal relationships with associates and other public and private individuals.
Operates, is responsible for the daily maintenance of, and initiates requests for repair and maintenance of vehicles, instruments, and equipment.
Performs related duties as required.

MINIMUM QUALIFICATIONS

Education and Experience:

Graduation from an accredited junior college with at least 12 semester hours in engineering, chemistry, or the physical or biological sciences and at least one year of progressively responsible experience in air pollution control or a related environmental or other program installing, operating, calibrating, modifying, maintaining, and repairing equipment and instruments,

OR

Graduation from high school or the possession of a certificate of high school graduation equivalency and at least two years of progressively responsible experience in air pollution control or a related environmental or other program installing, operating, calibrating, modifying, maintaining, and repairing equipment and instruments,

OR

Five years of progressively responsible experience in air pollution control or a related environmental or other program which includes at least two years installing, operating, calibratiang, modifying, maintaining, and repairing equipment and instruments.

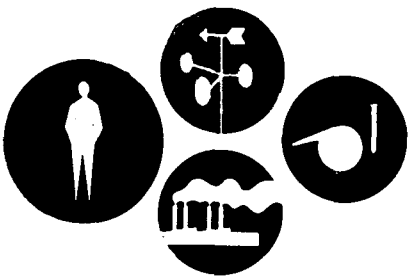
Knowledges, Skills, and Abilities:

Knowledge of technical terminology used in air pollution and related environmental fields.
Knowledge of basic chemical, electrical, and mechanical principles.
Knowledge of the air pollution control laws, rules, and regulations which affect stack sampling and source and emission inventorying.
Knowledge of the kinds and uses of hand and power tools.
Knowledge of the basic technical practices and standardized procedures utilized in stack sampling and source and emission inventorying.
Knowledge of the principles of operation and repair of air sampling instruments and equipment.
Knowledge of the hazards of and the safeguards essential to using chemical, electrical, and mechanical equipment and hand and power tools.
Some knowledge of administrative principles and practices.
Some knowledge of training principles.
Some knowledge of basic principles of leadership and supervision.
Skill at stack sampling and gathering data for source and emission inventorying.
Skill at performing arithmetic computations.
Skill at working with hand and power tools.
Skill at operating and repairing air sampling instruments and equipment.
Ability to evaluate technical processes and procedures and to develop recommendations for improvement.
Ability to analyze documents, reports, and plans.
Ability to discuss technical problems with fellow workers, superiors, and other public and private individuals.
Ability to maintain positive and productive relationships with associates and other public and private individuals.
Ability to present evidence and data and to testify as a witness in court cases.
Ability to work independently on specialized assignments.
Ability to assist higher-level staff engaged in training activities.
Ability to work under difficult and dangerous conditions including temperature extremes, heights, and fumes.
Ability to maintain technical and administrative records.
Ability to operate vehicles used for field work.

AIR POLLUTION CONTROL

AIDE

AIR POLLUTION CONTROL AIDE I



DEFINITION

Under close supervision, following detailed instructions, serves as a helper to a higher-level employee and learns to perform routine tasks.

EXAMPLES OF DUTIES

Observes and helps a higher-level employee working on a task such as:

- Analyzing air pollutants;
- Calibrating air sampling equipment;
- Keeping daily records;
- Maintaining vehicles.

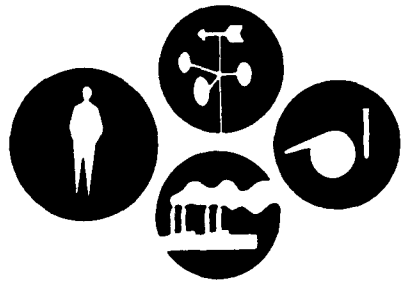
Loads, unloads, and moves equipment, instruments, and supplies.
Unpacks and stores equipment, instruments, and supplies.
Collects, cleans, and distributes laboratory glassware.
Keeps working areas neat and clean.
Through training, observation of higher-level employees, and practice, develops a basic knowledge and understanding of procedures for the tasks to which assigned.
Learns safe practices.
Performs related duties as required.

MINIMUM QUALIFICATIONS

Education and Experience:
None

Knowledges, Skills, and Abilities:
Ability to help higher-level employees performing various laboratory, shop, and office tasks.
Ability to learn to perform routine and repetitive tasks.
Ability to learn to use basic hand and power tools.
Ability to work cooperatively and productively with fellow workers.
Ability to follow safety precautions.
Ability to understand and follow simple written and oral directions.
Ability to read and write at the eighth grade level.
Ability to perform addition and subtraction.
Ability to communicate orally.

AIR POLLUTION CONTROL AIDE II



DEFINITION

Under close supervision, performs routine tasks as a helper to higher-level employees and learns to perform more difficult tasks requiring some technical knowledge and skill.

EXAMPLES OF DUTIES

Observes and helps higher-level employees performing a variety of air pollution control duties in laboratory, shop, field, and office, such as:

- Surveillance, inspection, and complaint investigation;
- Testing and analyzing air pollutants;
- Stack sampling;
- Source and emission inventorying;
- Installing, operating, and maintaining air sampling equipment;
- Operating and maintaining field vehicles;
- Keeping files and records on activities.

Loads, unloads, and moves equipment, instruments, and supplies.
Records receipt of, unpacks, and stores equipment, instruments, and supplies.
Decontaminates and sterilizes laboratory glassware.
Maintains working areas in a safe, neat, and clean condition.
Through training, observation of higher-level employees, and practice, develops a basic technical knowledge, understanding of practices and procedures, and some skill in performing the routine types of duties to which assigned.
Learns safe practices and safety principles.
Performs related duties as required.

MINIMUM QUALIFICATIONS

Education and Experience:

One year of experience in air pollution control or a related environmental program.

Knowledges, Skills, and Abilities:

Ability to perform routine and repetitive tasks as assigned.
Ability to learn to assist professional, administrative, and technical staff as needed.
Ability to acquire a basic technical vocabulary and understanding of basic technical practices and procedures.
Ability to learn to use hand and power tools.
Ability to develop skill in performing assigned tasks.
Ability to work cooperatively and productively with fellow workers.
Ability to learn and apply safety precautions.
Ability to understand and follow simple written and oral directions.
Ability to read and write at the eighth grade level.
Ability to perform addition and subtraction.
Ability to communicate orally and in writing.