Santa Barbara County Air Pollution Control District

INFORMATION TECHNOLOGIES AND AIR MONITORING SUPERVISOR

Class specifications are only intended to present a descriptive summary of the range of duties and responsibilities associated with specified positions. Therefore, specifications <u>may not include all</u> duties performed by individuals within a classification. In addition, specifications are intended to outline the <u>minimum</u> qualifications necessary for entry into the class and do not necessarily convey the qualifications of incumbents within the position.

DEFINITION:

Under direction plans, supervises, organizes and directs the Information Technologies (IT) and Air Monitoring activities of the Air Pollution Control District which requires knowledge in specialized areas including, but not limited to, computer system design, software application, program design, computer networking, security, system analysis, telemetry and relational databases; atmospheric and airborne emission (including contaminants) sampling, data collection, analysis, interpretation and summary; performing related duties as required.

CLASS CHARACTERISTICS:

The IT and Air Monitoring Supervisor is a single position classification responsible for performing the daily operational, supervisory and budgetary duties of the IT and Air Monitoring programs. As such, the IT and Air Monitoring Supervisor ensures that all program functions and activities operate effectively, efficiently, and securely within established deadlines and service levels and participates in special departmental projects. Performs direct supervisory duties of department staff and coordinates staff for coverage in all related areas.

ESSENTIAL FUNCTIONS: *(includes but is not limited* to *the following)*

The following is a partial description and is not a comprehensive list of duties.

- Plans, directs, supervises and tracks the work of others; evaluates staff performance and seeks ways to assist staff in professional development;

- Participates in the development and implementation of goals, objectives, policies and procedures related to functional areas of responsibility; develops and tracks section budget; coordinates section activities within and outside the division;

- Provides professional advice to management, technical expertise and staff direction, scheduling, guidance and training in areas such as database, network and software application operation and design; networking, data collection and IT systems; Prevention of Significant Deterioration (PSD) ambient air monitoring, State and Local Air Monitoring Stations (SLAMS), and Photochemical Assessment Monitoring Stations (PAMS). Implements Meteorological, Air Quality, Particulate, Quality Assurance Program(s), operates and maintains air quality monitoring stations;

- Directs, conducts and/or assists with measurements and analyses of toxic air pollutants including non-methane hydrocarbon monitoring using capillary gas chromatography. Interprets instrument charts; performs data validation of data generated at monitoring sites; interprets and records data; maintains quality control data; tabulates data; and conducts manual sampling and analyses of the atmosphere and emissions from industrial sources;

- Directs and/or develops computerized database routines and database queries to aid in the processing of air quality monitoring data and the generation of real-time alarms;

- Oversees permit-mandated monitoring program(s), (i.e., PSD, odor Monitoring) to ensure the collection of quality data and compliance with related permit conditions;

- Evaluates and consults with other divisions to assess the applicability of IT systems to the work of the agency and recommends appropriate hardware and related peripheral equipment;

- Plans and implements all hardware site preparations, design, installations and movements of equipment. Installs upgrades to equipment, develops improvements to networks and maintains an inventory of spare parts and replacement equipment;

- Installs, calibrates, operates, maintains and services ambient air monitoring instruments, telemetry equipment, prepares gaseous standard mixtures, repairs and rebuilds sensors and monitors, calibrates, services and operates electronic test equipment. Certifies and maintains standards for use in calibration of equipment. Performs on-site inspections of air monitoring equipment operations;

- Develops operating policies, procedures and standards; researches, develops, writes and maintains monitoring plan documents, quality assurance manuals, and operating procedures. Reviews and evaluates industry-developed monitoring plan documents, quality assurance manuals and operating procedures.

- Develops technical specifications and acceptance criteria for vendor bids; develops cost estimates for new IT and Air Monitoring hardware and software applications;

- Attends meetings, makes presentations and provides testimony; prepares reports related to air pollution control issues. Participates on state and/or national technical committees;

- Monitors State and Federal legislation and administrative requirements and other air quality regulations ad programs. Develops data and technical materials, conducts studies and prepares reports in support of air quality planning functions, permit development, complaint response and enforcement cases. Also provides same to private, state and federal monitoring programs;

- Directs and/or conducts field or laboratory analyses; performs test, measurement and equipment analysis and establishes instrumentation specifications; performs internal audits of systems and monitoring sites; prepares written reports;

- Provides user technical assistance, reviews established techniques and procedures and recommends improvements for IT and ambient air monitoring systems;

- Provides technical leadership by evaluating system and program designs and identifying and solving technical problems;

- Diagnoses and resolves hardware and software malfunctions; directs and reviews work performed by system vendors and evaluates progress and acceptability;

KNOWLEDGE/ABILITIES/SKILLS: *(The following are a representative sample of the KAS's necessary to perform the essential duties of the position)*

Knowledge Of:

Accounting, scientific and statistical systems and procedures; computer/network/internet technology, relational databases, applications and limitations; programming and report-generating languages; cost estimation techniques; programming and systems design, modification and documentation techniques; and data collections from remote field instrumentation, communication protocols (telemetry) over networks and data analysis software packages.

Complex principles and practices used in air pollution analysis and control including physics, chemistry, mathematics, natural sciences and meteorology as related to air quality management/air pollution control; local, regional state and federal regulations and policies governing air pollution control activities; scientific computer programming/modeling applications, research methods, methods of statistical analysis, principles and methods of measuring atmospheric conditions and pollution levels, methods of measuring stationary source emissions, chemical and physical characteristics of air impurities and their interactions with the environment; nomenclature and equipment used in air quality monitoring, data collection and planning; air pollution control devices and industrial processes; engineering calculations and statistical methods.

Installation, operation, maintenance, testing, and repair of instruments and equipment employed in sampling, monitoring and transmission of data involving electronics and chemical, physical and mechanical principles; rules and regulations relating to air quality standards and quality assurance standards applicable to air monitoring; electricity, electronics, mechanics and related mathematics as they apply to the use of air sampling instruments and equipment used to test the instruments; safety methods and devices used in working with and around electrical and electronic circuits and industrial gases.

Ability To:

Write clear, concise reports, memorandums and technical materials; analyze complex IT systems, data, instrumentation, equipment and networking problems and develop sound solutions; plan, direct, coordinate, evaluate and supervise the work of others; establish and monitor goals, objectives, deadlines, and priorities; develop and track budgets; coordinate a wide variety of IT and monitoring systems applications; establish and maintain effective working relationships; effectively use pertinent hand tools, equipment and facilities.

Skill To:

Operate an office computer and a variety of word processing, data management and other software applications and use tools (e.g., hand and power tools including but not limited to screwdrivers, hammers, pliers, wrenches, drill motor, soldering iron), and electronic test equipment to perform maintenance or repair operations.

QUALIFICATION GUIDELINES: *(The following are minimal qualifications necessary for entry into the classification)*

Education or Training:

Any combination of education and/or experience that has provided the knowledge, skills and abilities necessary for acceptable job performance. Example combinations include graduation with a bachelor's degree from an accredited college or university preferably with a major in computer science, information management, environmental planning, environmental studies, statistics, operations research, physics, chemistry, mathematics, meteorology, electronics, engineering or a

closely-related technical or scientific field; at least four years of increasingly responsible experience in technical ambient air quality monitoring and emission analysis, air quality and emission data management, software applications, systems analysis and design experience, including two years of supervisory experience;

An equivalent combination of training and experience indicating possession of the preceding knowledge and abilities may substitute for this education and experience. A master's degree in any of the required disciplines may be substituted for one year of experience; a doctorate degree in any of the required disciplines may be substituted for two years of experience;

WORKING CONDITIONS:

Position requires prolonged sitting, standing, walking, reaching, twisting, turning, kneeling, bending, squatting and stooping in the performance of daily activities. The position also requires grasping, repetitive hand movement and fine coordination in writing code, debugging programs, and in the general performance of duties using a computer keyboard and mouse or equivalent pointing device. Additionally, the position requires near vision in reading correspondence, statistical data on the computer and acute hearing is required when providing telephone service and communicating in person. The need to lift, drag and push files, monitoring equipment or other equipment/materials weighing up to 48 pounds also is required.

Dependent upon assignment, independent travel is required. Work is performed primarily in an office environment and may require some work in the field to perform repairs or modifications to the Data Acquisition System and may require exposure to hazardous conditions and unpleasant elements such as dust, fumes, vapor, solvents and high temperatures from operating processes, high noise levels and vibration and/or outside weather conditions. Fieldwork involves moderate physical exertion such as walking, bending, stooping, kneeling, squatting, twisting, reaching, climbing, and working on uneven surfaces. May be required to climb ladders and high structures to evaluate processes in operation and/or occasionally perform work at elevated heights.

SPECIAL REQUIREMENTS:

Possession of or ability to obtain and maintain a Class C California driver's license and a satisfactory driving record.

FLSA: Exempt
      Form 700 Required
      SBCAPCDEA, Unit 29

Adopted: