air pollution control district
SANTA BARBARA COUNTY

AIR QUALITY ENGINEER I/II/III

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

DEFINITION:

Under immediate supervision (I), general supervision (II), and limited supervision (III), performs a variety of assignments in the Engineering, Planning or Compliance Divisions. Individuals in the III classification may act as a lead engineer and/or supervise a special program/project.

CLASS CHARACTERISTICS:

Air Quality Engineer I is the entry and training class of the series. Incumbents work under immediate supervision. This entry-level class learns and/or utilizes: District practices, rules, policies and procedures; Local, State and Federal air pollution practices, rules and regulations; a working knowledge of engineering principles, practices and equipment used in air quality analysis and control; engineering mathematics, statistical techniques, combustion processes and elementary thermodynamics, quantitative instrumentation and analysis; and, the principles and practices necessary for the position. The Air Quality Engineer I performs the less complex work and routine assignments of the Division. Work becomes increasingly complex over time and requires less supervision as additional knowledge, skills and abilities are acquired.

Air Quality Engineer II is the fully experienced journey level class of the series. Incumbents work under general supervision. This journey-level class performs the full range of duties for the position, which requires performance of more difficult tasks requiring a working knowledge of District rules, policies and procedures; Local, State and Federal air pollution rules and regulations; a working knowledge of engineering principles, practices and equipment used in air quality analysis and control; engineering mathematics, statistical techniques, combustion processes and elementary thermodynamics, quantitative instrumentation and analysis; and, the principles and practices necessary for the position.

Air Quality Engineer III is the advanced journey-level class in the series. Incumbents work with minimal supervision, are lead workers, exercise independent judgment/decision-making, and administer programs/projects within the Division as well as supervising projects and providing guidance and oversight to other professional staff. This advanced journey-level class performs the most difficult and complex tasks requiring a working knowledge of District rules, policies and procedures; Local, State and Federal air pollution rules and regulations; a working knowledge of engineering principles, practices and equipment used in air quality analysis and control; engineering mathematics, statistical techniques, combustion processes and elementary thermodynamics, quantitative instrumentation and analysis; and, the principles and practices necessary for the position. The Air Quality Engineer III is not considered a supervisory class in that the selection and discipline of employees is not assigned to this level and the number of employees for which direction is provided is limited.

These positions report to the Division Supervisor.

ESSENTIAL FUNCTIONS: *(including, but not limited to, the following)*

- Provides project management functions and technical expertise in specialized areas such as permitting, rule development, air toxics, climate change, innovative technologies, continuous emission monitoring systems (CEMS), emission reduction credits (ERCs), and source testing.

- Reviews applications for Authority to Construct (ATC) permits, Permits to Operate (PTO), Federal Part 70 permits, Federal PSD permits, and Decision of Issuance (DOI) requests for ERCs. Provides professional engineering work in the processing, evaluation and issuance of permits, including calculation of air pollutant emissions, analysis of air pollution control equipment and processes, review of applicable rules and regulations, development of the permit and conditions, and preparation of an Engineering Evaluation. Makes recommendations to approve or deny the permit.

- Analyzes requests for permit exemptions and make recommendations to approve or deny the request.

- Provides regulated facilities and the public interpretation of rules, regulations and District policies and procedures.

- Conducts air quality impact analyses (AQIA) for proposed new or modified sources of air pollution, including support for lead agency environmental review.

- Conducts air toxics health risk assessments (HRA) for proposed new or modified sources of air pollution, AB 2588, lead agency environmental review, and other requests as assigned.

- Makes determinations and recommendations of best available control technology (BACT).

- Analyzes and prepares engineering reports in connection with a wide variety of air pollution control problems and recommends emission control and reduction strategies

- Conducts engineering review and inspections of new and existing pollution sources, including the review of plans, reports, and studies to determine source compliance.

- Develops, implements and maintains integrated database system (IDS) solutions for the Division.

- Develops, implements and maintains internal and external webpages.

- Implements and maintains the District's emission reduction credit (ERC) and offsets program.

- Observes field source tests; reviews source test plans and reports; schedules source test dates; prepare invoices; maintains records and evidence in such a way that effectively documents observations and actions taken; and, maintains and updates the Source Test database.

- Develops and/or assists in the development of District rules and regulations.

- Enforces permits, rules, regulations, policies and procedures

- Performs environmental review and makes recommendations.

- Maintains files and records according the District practices.

- Develops and revises Division forms and protocol documents.

- Participates in the development of innovative emission reduction strategies and programs based on analysis and investigations of emission sources.

- Assists in the development of requests for proposals (RFP), selection of contractors, management and budgeting of contracts, and tracking of expenditures.

- Prepares and/or assists in the preparation of staff reports, presentations and correspondence to the Board of Directors, Hearing Board, Community Advisory Council, schools, industry, community groups and conferences.

- Advises the public on policies, requirements and procedures of the District. Attends meetings, makes presentations and provides testimony as an expert witness; responds to public inquiries, participates in special events; disseminates information and answers inquiries from individuals and groups on air quality.

- Participates in air quality organizations and other work related groups and associations (e.g., CAPCOA). Attends meetings, makes presentations and provides testimony; prepares reports related to air quality issues. Participates on state and/or national technical committees.

- Monitors and reviews Local, State and Federal legislation and applicability to District operations.

- Other duties as assigned and as required to fulfill the essential functions of the position.

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 preparing statistical reports and data using a computer keyboard. 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, computer reports or other objects weighing up to 25 pounds also is required. For engineers in the field, the need to lift, drag or push equipment or other objects weighing up to 80 pounds may be required.

Dependent upon assignment, independent travel is required. Work is performed in an office environment and in the field and may require exposure to hazardous conditions and unpleasant elements such as dust, fumes, vapor, solvents, high temperatures from operating processes, high noise levels, 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. Depending upon assignment may be required to climb ladders and high structures to evaluate processes in operation and/or occasionally perform work at elevated heights.

Transportation to offshore sites may require the use of airplane, helicopters or marine vessels in inclement weather and open sea conditions and transference to oil platforms over open seas on a rope ladder.

QUALIFICATION GUIDELINES:

The following education and experience are the minimum qualifications necessary for entry into the classification.

Education and/or Experience

Air Quality Engineer I A Bachelor of Science in Engineering degree from an accredited college or university with a preferred major in chemical, mechanical, petroleum or environmental engineering (applicants who are currently in their final year of study leading to the required degree are encouraged to apply. Such applicants may compete in the examination and departmental selection processes but may not begin employment in a position until they have attained the required degree).

Air Quality Engineer II In addition to the requirements for the Air Quality Engineer I, at least two years professional experience: (a) as an Air Quality Engineer I, and/or (b) in the investigation/enforcement of air pollution control regulations, and/or (c) in the design of either mechanical equipment or chemical processes used in air pollution control.

Air Quality Engineer III In addition to the requirements for the Air Quality Engineer I, at least four years of professional experience: (a) as an Air Quality Engineer I/II, and/or (b) in the investigation/enforcement of

air pollution control regulations, and/or (c) in the design of either mechanical equipment or chemical processes used in air pollution control; and, two years of increasingly responsible professional experience performed in an independent manner.

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

Knowledge of:

Complex engineering principles and practices used in air pollution analysis and control including physics, chemistry, mathematics, elementary thermodynamics, 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; environmental regulations such CEQA and NEPA; 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/measurement, data collection, and planning; air pollution control devices and industrial processes; and, engineering calculations and statistical methods.

Ability to:

Exercise sound independent judgment; communicate effectively orally and in writing; read, comprehend, interpret, incorporate and utilize District rules and regulations; plan, direct, organize, carry out, and/or evaluate comprehensive engineering studies and analysis; prepare clear, complete, and technically accurate reports; analyze and evaluate engineering plans, specifications, technical reports and blueprints; perform complex mathematical and statistical analyses; interpret, explain, and enforce regulations and policies; develop recommendations based on findings, and reach sound and defensible conclusions; collect environmental and stationary source emission data; work effectively with various governmental agencies, private firms, and the general public; analyze situations and take effective action; speak before groups, organizations, regulatory bodies and professional meetings; establish and maintain effective working relationships; perform in stressful or confrontational situations; demonstrate tact and diplomacy; respond constructively to conflict and develop effective resolutions.

Skill to:

Operate an office computer and a variety of word processing, data management and other software applications; use, calibrate and maintain portable air quality analyzers; and, use tools to perform manual maintenance operations.

SPECIAL REQUIREMENTS:

Possession of or ability to obtain and maintain a Class C California driver's license. As required, possession of, or the ability to obtain, certification as a Visible Emission Evaluator by the California Air Resources Board and/or respirator certification, and/or confined space entry certification and/or hydrogen sulfide certification.

FLSA: I/II/III Exempt
I/II Flex
ETA, Unit 28

Adopted: March 16, 2023