FEBRUARY 2025
FLSA: NON-EXEMPT
Bargaining Unit: PL
JCN: 4127/4128

AIR QUALITY ENGINEER I/II

DEFINITION

Under general direction, performs professional engineering evaluations and assessments to minimize and control air pollution, air pollution precursors, and toxic air contaminants to protect human health and the environment; performs engineering evaluations of stationary and portable pollutant emitting sources; evaluates applications for permits to construct and operate; evaluates emission inventory plans and reports; develops and implements grant programs; and performs related duties as assigned.

SUPERVISION RECEIVED AND EXERCISED

Receives immediate or general supervision from the Sr. Air Quality Engineer or Air Pollution Control Officer. Exercises no supervision over staff.

CLASS CHARACTERISTICS

Air Quality Engineer I: This is the entry-level class in the Air Quality Engineer series. Initially under immediate supervision, incumbents learn and perform the more routine tasks and duties assigned to positions within this series. As experience is gained, assignments become more varied, complex, and difficult; immediate supervision and frequent review of work lessen as an incumbent demonstrates skill to perform the work independently. Positions at this level usually perform most of the duties required of the positions at the II level but are not expected to function at the same skill level and exercise less independent discretion and judgment in matters related to work procedures and methods.

Air Quality Engineer II: This is the fully qualified journey-level class in the Air Quality Engineer series. Positions at this level are distinguished from the I-level by the performance of the full range of duties as assigned, working independently, and exercising judgment and initiative. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit.

Positions in the Air Quality Engineer class series are flexibly staffed and positions at the II-level are normally filled by advancement from the I-level after gaining the knowledge, skill, and experience, experience, certification which meet the qualifications and after demonstrating the ability to perform the work of the higher-level class.

This class is distinguished from the Sr. Air Quality Engineer in that the latter is a full-level supervisor with responsibility for assigning, reviewing, and evaluating the work of assigned professional, technical, and administrative support staff; and performing the more complex, sensitive and difficult industrial and commercial sources of air pollution, including special engineering studies and projects.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

- Evaluates stationary and mobile sources of air pollutants and contaminants to ensure compliance with federal, state, and local laws and regulations.
- Reviews a wide variety of documents for development, construction, and operation projects to calculate emission rates, and advises on the same.

- Reviews and evaluates permit applications, including calculating criteria, emission rates and permit fees, determining compliance or non-compliance with Air Quality regulations, determining and recommending best available control technology, defining permit conditions, and issuing authority to construct permits; screens and processes annual data updates for permits.
- Reviews new development proposals for consistency with California Environmental Quality Act (CEQA), Air District rules, federal and state requirements; drafts and provides comments.
- Conducts on-site compliance inspections of sources and abatement devices; evaluates compliance and recommends enforcement actions.
- Reviews permit and enforcement files to prepare materials and responses for variance requests, violation notices, case summaries, and hearing board referrals; recommends appropriate actions; may testify on behalf of the District.
- Calculates, reviews, and corrects the emissions inventory; evaluates accuracy of source emission calculations and methodologies; develops, maintains, and refines computer models of activity levels and emissions.
- Conducts environmental audits, compliance inspections, and source tests; evaluates results and recommends appropriate actions, including violation notices.
- Conducts toxic risk screening and risk assessment analyses; calculates toxic emissions, determines and applies appropriate air dispersion model, calculates maximum concentrations and calculates risk; recommends approval or denial of permit application.
- Reviews and monitors federal and state legislation related to the area of assignment and evaluates possible effects of legislation on District policies and procedures; makes recommendations for and implements changes as needed.
- Researches grant opportunities, prepares applications, and implements awarded grant funds; administers District grants, including screening grant applicants for eligibility, tracking expenditures, calculating reductions achieved, and preparing and submitting reports.
- Develops and recommends revisions to District rules, procedures, Sacramento Region State Implementation Plan submittals, and policies.
- Responds in person, by telephone, and in writing to industry, public, and District inquiries regarding regulation interpretation, permit preparation, various compliance measures, and emission calculation methods.
- Serves on interdisciplinary committees and task forces as an air quality advisor; acts as a consultant to community groups and participates on a variety of planning and educational committees.
- Stays abreast of new trends and innovations in the field of air quality and air contaminants.
- Provides technical assistance to staff.
- Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Engineering principles and practices applicable to assigned area of responsibility.
- Air pollution analysis techniques and control methodologies and equipment.
- Applicable federal, state, and local laws, codes, and regulations.
- Industrial processes and pollution control equipment.
- Industrial chemical processes and equipment.
- Recordkeeping and report preparation practices.
- Processes and procedures of a municipal government agency applicable to the area of assignment including the conduct of public hearings and process for gaining public approval.
- Grant application and administration procedures.
- Principles and techniques for working with groups and fostering effective team interaction to ensure teamwork is conducted smoothly.

- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and County staff.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Modern equipment and communication tools used for business functions and program, project, and task coordination.
- Computers and software programs (e.g., Microsoft software packages) to conduct, compile, and/or generate documentation.

Ability to:

- Provide engineering analysis and evaluation of new and modified source air pollution control engineering plans, permit applications, and modifications to permit requests for compliance with various air pollution control standards.
- Research, process, and evaluate applications and permit renewal requests according to engineering and air pollution control standards and make recommendations regarding approval, denial, or issuance of warnings or violation notices, conduct field inspections, samplings, and emissions tests as necessary.
- Apply sound engineering principles and techniques in a variety of air quality engineering matters.
- Perform detailed analysis of designs, specifications, and plans.
- Conduct a variety of air quality engineering studies.
- Analyze complex engineering data and reports, evaluate alternatives, and reach sound conclusions.
- Develop and recommend environmental mitigation for projects.
- Prepare comprehensive, effective grant applications; administer grant funded programs and produce reports.
- Perform facility inspection to verify initial compliance with the construction and operation of permitted equipment and activities.
- Prepare clear, concise, and accurate reports, records, and correspondence.
- Understand, interpret, and apply all pertinent laws, codes, regulations, policies and procedures, and standards relevant to work performed.
- Effectively represent the District and the County in meetings with governmental agencies; community groups; various business, professional, and regulatory organizations; and in meetings with individuals.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- Effectively use computer systems, software applications, and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:
A combination of the required experience, education, and training that would provide the essential knowledge, skills, and abilities is qualifying, however, education may not solely substitute for the required experience.

Air Quality Engineer I

Equivalent to a bachelor's degree from an accredited college or university with major course work in air pollution, environmental, chemical, mechanical, petroleum, or combustion engineering or a related field.

Air Quality Engineer II

Equivalent to a bachelor's degree from an accredited college or university with major course work in air pollution, environmental, chemical, mechanical, petroleum, or combustion engineering or a related field; and two (2) years of progressively responsible experience in air quality engineering or a closely related field.

Licenses and Certifications:

- Possession of, or ability to obtain and maintain, a valid California or Nevada Driver's License and a satisfactory driving record.
- Possession of a Visible Emissions Evaluation certification issued by the Air Resources Board within 12 months of appointment.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to inspect source sites, including traversing uneven terrain, climbing stairs, standing for extended periods, and other temporary or construction access points; to operate a motor vehicle and to visit various County and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person, before groups, and over the telephone. This is primarily a sedentary office classification with frequent field work such as inspecting business, residence and development sites. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 25 pounds. Reasonable accommodations will be made for individuals on a case-by-case basis.

ENVIRONMENTAL CONDITIONS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees also work in the field and are occasionally exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with members of the public or with staff under emotionally stressful conditions while interpreting and enforcing District policies and procedures.

WORKING CONDITIONS

Incumbents are required to periodically work evenings, weekends, and on-call.