



YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

SENIOR AIR QUALITY ENGINEER

Job Description

DEFINITION

Under general supervision, assists the Engineering Manager in the planning, organization, direction, and coordination of various technical and engineering activities of the District; including providing lead direction to engineering staff; performs more difficult and complex engineering work; and performs other related duties as required.

SUPERVISION RECEIVED AND EXERCISED

The **Senior Air Quality Engineer** receives general supervision from a supervisor or manager. Provides functional and technical direction to Assistant and/or Associate Air Quality Engineer and to others assisting the Engineering Division in division-related projects.

CLASS CHARACTERISTICS

This is the advanced journey level, lead, or specialist class in the Engineering series. Incumbents acting in a lead capacity have formal responsibility for coordinating, training, and reviewing the work of other staff on a regular basis. Incumbents acting in this classification are responsible for complex or particularly difficult engineering projects and studies requiring specialized knowledge and skills not typically expected of journey-level engineers.

EXAMPLES OF ESSENTIAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Develops program guidelines and rules; establishes goals and deadlines; administers programs; reviews permit applications for Authority to Construct (ATC), Permits to Operate (PTO), Emission Reduction Credits (ERCs), and Federal permits (Title III, IV, or V); meets with applicants and assists them with the application process; reviews the design of air pollution controls associated with the industrial or commercial processes; analyzes operational procedures to determine control of emissions; calculates emission rates associated with permits; identifies and evaluates or prepares Toxic Air Contaminant (TAC) and risk assessment determinations; checks applicant compliance with District rules and regulations as well as state and federal regulations; generates equipment list; writes ATCs and PTOs and determines fees; recommends approval or denial of applications for ATC and PTO.
- May act in a lead capacity for the implementation of Titles III, IV, and V of the Federal Clean Air Act; develops and updates Title V Permits; performs research work, engineering studies, and calculations related to the statutes; coordinates with the Federal Environmental Protection Agency (EPA) and other governmental agencies; reviews Title V applications; drafts evaluations determining compliance; drafts proposed permits; issues public notices; respond to comments; issues the final permit.
- May act in a lead capacity for the implementation of the State Air Toxics “Hot Spots” Information and Risk Assessment Act (AB 2588); performs research work, engineering studies, and calculations related to the statute; coordinates with the California Air Resources Board (ARB) and other governmental agencies; reviews and evaluates inventory plans and risk assessments; completes prioritizations for risk assessments; prepares Annual Reports.
- May act in a lead capacity for the review and preparation of criteria and toxic emission inventories and risk assessment pursuant to the “Hot Spots” Information and Risk Assessment Act (AB 2588) and

for California Environmental Quality Act (CEQA) requirements; informs facilities that criteria pollutants or toxic emission inventory must be updated; provides guidance on how to prepare an inventory; reviews and/or helps to prepare emission inventories; enter emission inventory data into the Hotspots Analysis Reporting Program (HARP) database for submittal to ARB; determines if a risk assessment must be prepared from toxic emissions inventory data and notifies sources if an assessment is needed; provides guidance on the preparation of risk assessments; reviews risk assessment plans; prepares electronic files for State review.

- May act in a lead capacity for the engineering and technical aspects of the gasoline-enhanced vapor recovery systems; conducts reviews of ARB Executive Orders; develops operating conditions for new and modified vapor recovery equipment; provides technical justification for enforcement decisions; conducts workshops and training for gasoline stations regarding regulator changes.
- Maintains Emission Reduction Credit (ERC) Bank; addresses Emissions Banking/Offset questions; reviews ERC applications; issues ERCs.
- Develops new rules and modifies existing rules; drafts rule language and staff reports; provides data for environmental documents; sets and holds public meetings to discuss proposals; drafts legal and public notices; drafts proposed rules, staff reports, and resolutions; presents proposed rules to Advisory Committee and Air District Board; drafts transmittal; provides newly adopted rules with documentation to oversight agencies.
- Serves on special committees to develop guidelines and procedures; makes community presentations; provides functional direction to subordinate engineers, technicians, and/or clerical staff.
- Represents the District on statewide task forces; and technical committees; coordinates activities with federal, state, and local regulatory agencies.
- Inspects new or existing sources of air contaminants and evaluate the effectiveness of control equipment; determine compliance and identify problems.
- Generates air dispersion models and conducts health risk assessments for projects; calculates Toxic Air Contaminant (TAC) emissions; gathers and documents input parameters to mathematical models used to estimate potential health risks for substances emitted into the air.
- Provides compliance assistance to constituents including small business owners or sole proprietors, consultants, and public agency representatives; meets with industrial representatives to discuss modifications; provides information to applicants, consultants, and the public regarding permit requirements and District air quality rules and regulations.
- Provides information to other divisions regarding the impact of violations, explanation of permit conditions, and explanation of emission factors and emissions rates; confers with other air pollution control districts regarding industrial processes, and control systems; may act as an expert witness.
- Project leader for engineering studies or programs; develops program guidelines and notifications to sources/persons affected by new or modified regulations; serves on special committees to develop guidelines and procedures; makes community presentations to convey technical information.
- Works with data including the input and review of information in the database; generates reports with specific information on the subject of permitted sources to assist in program implementation; responds to requests for information and clarification through the generation of reports.
- Assists and participates in source testing; evaluates source testing reports.
- Establishes positive working relationships with representatives of community organizations, state/local agencies, District management and staff, and the public.
- Performs other duties as assigned.

QUALIFICATION GUIDELINES

Education and/or Experience

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

- Graduating from college with a Bachelor's degree in chemical, environmental, mechanical, or a related

engineering field and two years of experience as an Associate Air Quality Engineer.

KNOWLEDGE AND ABILITIES

Knowledge of:

- Engineering principles, practices, methods, and procedures.
- District engineering policies and procedures.
- Principles of fluid dynamics.
- Air dispersion modeling techniques.
- Practices of program management.
- Toxic air contaminants.
- Health risk assessment procedures.
- Applicable federal, state, and local laws, codes, and regulations related to air quality control.
- Principles and practices of project management and work organization.
- Basic principles, methods, and techniques of leading and providing training to assigned staff.
- Methods and techniques of scheduling work assignments.
- Standard office procedures, practices, and equipment.
- Modern office equipment, including a computer and applicable software.
- Methods and techniques for record-keeping and report preparation and writing.
- Occupational hazards and standard safety practices.
- English usage, spelling, vocabulary, grammar, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Analyze and solve engineering problems involving advanced processes and control equipment.
- Maintain working relationships with staff, public, commercial, and industrial sources, and other regulatory agencies.
- Provide lead direction, instruction, and training.
- Complete assignments within the District's permitting process in a timely and accurate manner.
- Process diverse permit applications.
- Prepare technical reports and presentations.
- Negotiate effectively.
- Prepare and give presentations.
- Identify the type and amount of toxic air contaminant emissions.
- Prepare health risk assessments.
- Understand, explain, and apply applicable laws, codes, and regulations.
- Read, interpret, and record data accurately.
- Organize, prioritize, and follow up on work assignments.
- Work independently and as part of a team.
- Make sound decisions within established guidelines.
- Respond to issues and concerns from contractors, permit holders, and the community.
- Analyze a complex issue and develop and implement an appropriate response.
- Observe safety principles and work in a safe manner.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

PHYSICAL ABILITIES

Must be able to perform essential functions of the job. This position requires sitting, prolonged standing, walking on level and slippery surfaces, reaching, twisting, turning, kneeling, bending, stooping, squatting,

crouching, grasping, and making repetitive hand movements in the performance of daily duties. The position also requires both near and far vision and color vision when inspecting work and operating assigned equipment. The need to lift, carry, and push tools, equipment, and supplies weighing 25 pounds or less is also required. The nature of the work also requires the incumbent to climb ladders and drive motorized vehicles when visiting businesses or construction sites. The position requires repetitive hand-eye coordination and fine manipulation skills to prepare reports and data using a PC keyboard, computer mouse, and other office equipment. Travel by vehicle is required.

At times the public can disagree with the requirements of regulatory agencies and may be difficult to work with. This position must be able to handle these types of situations with diplomacy and tact.

WORKING CONDITIONS - ENVIRONMENTAL ELEMENTS

Incumbents perform work in an office setting with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Incumbents also occasionally work outdoors in all weather conditions, including wet, hot, and cold with exposure to dust, fumes, diesel, gas, and other vapors. Incumbents may be required to wear personal protective equipment based on established safety policy.

SPECIAL REQUIREMENTS

- A valid California driver's license for the equipment to be operated.
- Safety training as required by the District's Safety Program.
- California registration as a professional engineer is desirable.
- California engineer-in-training certification is desirable.

FSLA Status: Non-exempt - Covered under Collective Bargaining Unit

Approved: 06/1992

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