April 2016
FLSA: NON-EXEMPT

AIR QUALITY ENGINEER I/II

DEFINITION

Under immediate or general supervision, learns to perform and performs professional engineering reviews of emission sources; evaluates permit applications for Authority to Construct (ATC) and Permits to Operate (PTO) and recommends approval or denial; reviews design of air pollution control equipment associated with industrial or commercial processes; evaluates emission inventory plans and reports; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

The **Air Quality Engineer I** receives immediate supervision from the Supervising Air Quality Engineer. Exercises no supervision of staff.

The **Air Quality Engineer II** receives general supervision from the Supervising Air Quality Engineer. Provides functional and technical direction to lower-level staff.

CLASS CHARACTERISTICS

The **Air Quality Engineer I** is the entry-level class in the Air Quality Engineer series that allows the incumbent to develop journey level knowledge and abilities. Initially, under immediate supervision, incumbents perform the more routine and less complex assignments within an established procedural framework, where there are minimal consequences of error, including assisting more experienced engineers, while learning the permit evaluation process, standards, and procedures. Independent assignments consist of the less complex permit evaluations. This classification is alternatively staffed with Air Quality Engineer II and incumbents may advance to the higher level after gaining experience and demonstrating a level of proficiency that meets the qualifications of the higher- level class. 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 usually exercise less independent discretion and judgment in matters related to work procedures and methods. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise.

The **Air Quality Engineer II** is the journey level class in the Air Quality Engineer series in which incumbents are expected to independently perform the full scope of engineering assignments related to controlling industrial and commercial sources of air pollution, including special engineering studies and projects. 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 more independent 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. This class is distinguished from the next higher classification of Air Quality Engineer III in that the latter is the advanced journey-

level class in the series and may have project or program management responsibilities, which include organizing, assigning, and reviewing the work of others participating in technically complex programs such as the Federal Operating Permits Program and Toxics Emission Inventory and Risk Assessment Program. Additionally, at the higher level of Air Quality Engineer III, incumbents are expected to perform the most complex duties assigned to the work unit, requiring specialized knowledge and/or the ability to perform special assignments. The level III reflects the application of skills above that required of a journey level engineer, such as rule development and handling the most difficult, sensitive, or critical projects.

EXAMPLES OF ESSENTIAL JOB FUNCTIONS (Illustrative Only)
Management reserves the rights 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.

- Reviews permit applications for Authority to Construct (ATC) and Permits to Operate (PTO); interviews applicants and assists them with the application process; reviews design of air pollution controls associated with the industrial or commercial process; analyzes operational procedures to determine control of emissions; calculates emissions rates associated with permit; creates and/or maintains inventory of criteria air pollutants for stationary sources; identifies and evaluates or prepares toxic air contaminant and risk assessment determinations; checks applicant's compliance with District rules and regulations; generates equipment list.
- Conducts field inspections on manufacturing, commercial, and industrial sources including dry cleaners, gasoline stations, automotive coating facilities, and businesses with internal combustion engines.
- Inspects new or existing sources of air contaminants and evaluates effectiveness of control equipment; determines compliance and identifies problems.
- Generates air dispersion models and conducts health risk assessments for each ATC and PTO; calculates Toxic Air Contaminant (TAC) emissions inventory; gathers and documents input parameters to mathematical models used to estimate potential health risks for substances emitted into the air; recommends approval or denial of applications for ATCs and PTOs; writes ATCs and PTOs and determines fees; inspects sites prior to issuing ATCs and PTOs.
- Reviews toxic emissions inventory plans and reports.
- Provides compliance assistance to various constituents including small business owners or sole proprietors, engineering consultants, and public agency representatives; meets with industrial representatives to discuss modifications recommended for compliance with air quality rules and regulations; provides information to applicants, consultants and the public regarding permit requirements and District air quality rules and regulations.
- Provides information to other divisions regarding 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, control systems; may act as an expert witness.
- Acts as a 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 in the development and implementation of District air quality rules and regulations.
- 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.

QUALIFICATIONS

Knowledge of:

- Engineering principles, practices, methods, and procedures.
- District engineering policies and procedures.
- Principles of fluid dynamics.
- Air dispersion modeling techniques.
- Toxic air contaminants and health risk assessment procedures.
- Applicable federal, state, and local laws, codes, and regulations, including those related to air quality control.
- Methods and techniques of scheduling work assignments.
- Standard office procedures, practices, and 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:

- Learn and apply District engineering policies and procedures.
- Perform engineering computations.
- Prepare technical reports.
- Interpret and analyze processes and equipment blueprints and specifications.
- Analyze engineering problems and recommend solutions.
- Identify 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.
- Follow written and oral directions.
- Observe safety principles and work in a safe manner.
- Operate an office computer and a variety of word processing and software applications.
- 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.

Education and 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:

Air Quality Engineer I and II: Equivalent to the completion of a Bachelor's degree from an accredited college or university with major coursework in chemical, environmental, or mechanical engineering, or a related field.

Air Quality Engineer I: One (1) year of experience in air pollution control engineering. Additional related coursework or engineering training may substitute for the required experience.

Air Quality Engineer II: Three (3) years of experience in air pollution control engineering or two (2) years of experience in a position equivalent to an Air Quality Engineer I with the MBARD.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid Class C California Driver License.

PHYSICAL DEMANDS

Position requires sitting, prolonged standing, walking on level and slippery surfaces, reaching, twisting, turning, kneeling, bending, stooping, squatting, crouching, grasping, and making repetitive hand movement 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.

ENVIRONMENTAL ELEMENTS

Incumbents 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 protective clothing and breathing equipment while working around asbestos or other toxins. Additionally, employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.