



JULY 2012
FLSA: EXEMPT

ASSOCIATE ENGINEER

This class specification indicates, in general terms, the type and level of work performed as well as the responsibilities of employees in this classification. The job functions described are not to be interpreted as being all-inclusive to any specific employee.

DEFINITION

Under general supervision, performs a variety of difficult and responsible engineering assignments and/or tasks that may include project management; evaluating and reviewing drawings and designs; issuing and renewing permits; investigating and reviewing compliance issues; preparing compliance documents; developing/managing database systems; providing technical assistance to staff; and performing related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from an Engineering Supervisor or other assigned supervisory or management staff. Exercises no direct supervision of staff.

CLASS CHARACTERISTICS

This is the second level within the professional engineering job series. Incumbents are expected to possess comprehensive knowledge of the concepts, practices, procedures and policies of engineering. Employees perform diversely difficult and responsible assignments and/or tasks. Employees at this level are required to be fully trained in all areas related to assigned area of responsibility. The Associate Engineer is distinguished from the Engineer in that the Engineer serves as a technical resource and advisor, is assigned diversely complex assignments and is expected to function at the highest level of independence and discretion, and be in responsible charge of the engineering work.

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.

- Evaluates a variety of engineering drawings, systems, and processes for the improvement of wastewater treatment facilities; participates in project design and prepares engineering plans.
- Inspects, diagnoses, and develops corrective action plans to plant and sewer system operation and maintenance upgrades and problems.
- Reviews wastewater facility plans and specifications and provides input on functional aspects of proposed facilities.
- Oversees and/or evaluates the bid and proposal process; prepares purchase recommendations for moderately complex wastewater treatment facility and collection system improvement projects and equipment.
- Prepares emergency preparedness plans and training procedures.
- Coordinates projects across departments to ensure no disruptions with critical processes.
- Tracks the District's conformity to regulatory requirements for permit compliance; reviews wastewater treatment processes and removal efficiencies and discharge data of treatment facilities.

- Tracks past chemical and utility usage to calculate current and estimated future fiscal year usage for the preparation of budgets and reports.
- Analyzes and performs optimization studies of various chemicals, unit processes, odor control, and utilities throughout the treatment plant; prepares and reviews chemical specifications.
- Prepares memos and reports regarding wastewater treatment/conveyance facilities and conducts inspections of wastewater treatment facilities and construction sites.
- Monitors remote chemical dosing sites and the effectiveness of caustic slug dosing.
- Provides training regarding new regulations, equipment, and procedures.
- Conducts air dispersion, fate-transport, interceptor odor, and health risk assessment modeling using several computer software programs in order to assess air emissions from the wastewater treatment plants and collection systems and their impact to the surrounding communities; coordinates upgrades, maintenance, and troubleshooting of software as necessary.
- Prepares the scope of services on air quality projects; selects consulting engineers, establishes scheduling and performance criteria; monitors performance and budget, and prepares reports.
- Manages SCAQMD permits; updates permit index, pays permit fees; prepares and submits permit applications; establishes permit conditions on new permits; develops auditing programs and auditing compliance activities.
- Designs, reviews, and/or evaluates plans for air quality control equipment; develops and manages air quality database system and evaluates and selects control technologies to achieve air quality compliance requirements; oversees research for air pollution control and implementation, and oversees emission modeling systems and testing programs.
- Develops conformity documents for District facilities; assists in the development of air quality policies; tracks, analyzes, and seeks ways to potentially influence new legislative and regulatory developments related to air quality compliance.
- Represents and makes presentations on behalf of the department and/or District with regulatory agencies, public, contractors and consultants; prepares memos and reports regarding air quality management.
- Issues and renews industrial wastewater discharge permits to industrial facilities; evaluates permit applications and design drawings of industrial waste management practices; finalizes permits and permit requirements; tracks compliance.
- Implements permittees' industrial sampling and monitoring programs; evaluates sampling and monitoring data to determine compliance; applies combined wastestream formula; issues notices of violations, scheduling requirements, and tracks compliance.
- Undertakes enforcement programs to return industries to compliance; evaluates industry compliance histories; participates in search warrants; performs evaluations of the permittees' corrective response plans and waste management proposals; prepares and finalizes correspondence; tracks compliance.
- Conducts technical facility inspections and compliance audits to assess and verify permit application information and design drawings, assesses the cause of violations, and conducts pollution prevention assessments.
- Interacts with industrial permittees, other regulatory agencies, and the public in person, by telephone, and in writing by responding to requests regarding regulatory, permit, and enforcement issues; resolves issues regarding flowbase, category, sampling, meters, and production-based limits.
- Prepares compliance agreements, administrative orders, administrative complaints, staff reports, and administrative fees/penalties.
- Assists in the development of source control policies and practices and the implementation of new regulatory requirements; assists in the operation of source control and air quality testing equipment; collects samples.
- Interprets regulatory requirements for applicability to the District's facility operations; takes appropriate actions to ensure that the District is operating within regulatory guidelines.
- Ensures compliance and implementation of the Title V Federal Air Quality permit; provides information and trains operators on the permit's effects on District operations.
- Investigates and prepares recommendations regarding new technologies.

- Writes reports for the EPA, RWQCB, and other regulatory agencies.
- Represents and makes presentations on behalf of the department and/or District with regulatory agencies, public, contractors and consultants; prepares memos and reports regarding air quality management.
- Performs project management functions for various construction projects; ensures compliance with contract documents and regulatory permits; assists in monitoring the project schedule; ensures compliance with specifications.
- Participates in the bid, proposal, and purchase recommendation processes for various construction projects; prepares detailed drawings, technical specifications, and scopes of work; reviews proposals, selection of consultants/consulting engineers, and prepares agenda reports for the Board of Directors.
- Prepares designs and specifications; performs constructability reviews on project designs; participates in construction management functions to ensure projects are constructed in accordance with contract documents, permits, and applicable building codes.
- Design construction activities to minimize impact to plant facilities and the public.
- Participates in design and construction engineering services on engineering projects, systems, and processes, the design of engineering plans, startup and commissioning support services.
- Reviews consultant designs for compliance with Engineering Standards, safety and regulatory requirements, design quality expectations, and stakeholder needs.
- Develops the scope of work for new wastewater treatment facility projects and reviews consultant proposals to ensure that drawings and detailed specifications are prepared according to project requirements.
- Participates in the preparation, or prepares, engineering and construction budgets and requests for proposals.
- Provides technical assistance to engineering aides during the shop drawing submittal process.
- Processes easements, grant deeds, agreements, and permits during the preparation of contract bid documents for the construction of wastewater treatment facilities.
- Performs utility searches and resolves difficult utility location conflicts during the construction of facilities.
- Prepares engineering plan clarifications and changes in response to contractor's request for information during construction of facility and verifies that equipment meets design specifications and regulatory requirements.
- Conducts power system studies of the electrical equipment to determine how modifications affect the systems and plans future growth.
- Prepares memos and reports regarding wastewater treatment facilities management and conducts inspections of wastewater treatment facilities and construction sites.
- Represents and makes presentations on behalf of the District with regulatory agencies, public, contractors and consultants; prepares memos and reports regarding air quality management.
- Assists in determining work priorities; ensures adherence to established policies and procedures.
- Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of engineering; researches emerging products and enhancements and their applicability to District needs.
- Performs related duties as required.

QUALIFICATIONS

Knowledge of:

- Principles, practices, policies, and procedures of construction management, engineering, mathematics, environmental science.
- Operations of wastewater management systems and flow regimes.
- Principles of air dispersion, fate-transport, interceptor odor, and health risk analysis modeling.
- Principles and techniques of project management and contract negotiation and/or administration.
- Principles and applications of critical thinking and analysis.

- Applicable Federal, State, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Modern office practices and technology, including personal computer hardware and software applications related to the work, such as computer-aided drafting (CAD) concepts and applications and Geographic Information Systems (GIS) programs.
- Modern developments, current literature, and sources of information regarding engineering.
- Principles of advanced mathematics and their application to engineering work.
- Practices of researching engineering and design issues, evaluating alternatives, making sound recommendations, and preparing and presenting effective staff reports.
- Methods and techniques of effective technical report preparation and presentation.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Perform work of a specialized nature requiring the ability to use independent judgment and personal initiative.
- Conduct engineering research projects, analyze problems, evaluate alternatives, make sound recommendations, and prepare effective technical staff reports.
- Prepare, understand, and interpret engineering construction plans, specifications, and other contract documents.
- Prepare reports with recommendations related to engineering studies.
- Apply critical thinking and analysis to a broad range of situations.
- Use critical thinking techniques in reaching independent decisions.
- Assist in and develop the administration of contracts for professional services and construction in a public agency setting.
- Interpret, apply, explain, and ensure compliance with Federal, State, and local policies, procedures, laws, rules, and regulations.
- Identify problems, research and analyze relevant information, develop and present recommendations and justification for solution.
- Use critical thinking techniques in determining problem resolutions.
- Read and understand technical drawings and specifications.
- Recognize discrepancies from as-built to contract specifications and recommend reconciliation.
- Perform mathematical and engineering computations with precision.
- Make engineering design computations and check, design, and prepare engineering plans and studies.
- Recognize and properly deal with hazardous materials/environments.
- Run various air dispersion, fate-transport, interceptor odor, and health risk analysis models.
- Represent the department and the District in meetings with governmental agencies, community groups, and various business, professional, and regulatory organizations and individuals.
- Prepare and present clear, concise, and logical written and oral reports, correspondence, policies, procedures, legal descriptions, and other written materials.
- Establish and maintain a variety of filing, record-keeping, and tracking systems.
- Maintain confidentiality in maintaining critical and sensitive information, records, and reports.
- Make sound, independent decisions within established policy and procedural guidelines.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment including computer equipment and specialized software applications programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and legal guidelines.
- Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work.

Employment Standards:

Any combination of education and experience that provides the required knowledge, skills, and abilities may be qualifying as determined by OCSD.

1. Possession of a bachelor's degree from a college or university which is accredited by the US Department of Education, with major coursework in engineering, or a related field; AND,
2. Five (5) years of engineering experience, including three (3) years at a level comparable to an Assistant Engineer.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid California Driver's License by time of appointment.

Disaster Service Workers:

All Orange County Sanitation District employees are designated Disaster Service Workers through state law (California Government Code Section 3100-3109). Employment with the Orange County Sanitation District requires the affirmation of a loyalty oath to this effect. Employees are required to complete all related training as assigned, and to return to work as ordered in the event of an emergency.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to inspect District development sites, including traversing uneven terrain, climbing ladders, stairs, and other temporary or construction access points, to operate a motor vehicle, and to visit various District 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 although standing in and walking between work areas and to conduct inspections may be required. 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.

ENVIRONMENTAL ELEMENTS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may work in the field and occasionally be 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 upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.