

Goleta Sanitary District Job Description

Job Title: Instrumentation /Electrician Technician
Department: Facilities Maintenance
Reports To: Facilities Maintenance Supervisor
FLSA Status: Non Exempt (Non-Salary)

SUMMARY

Under general supervision, performs a wide variety of skilled tasks in the installation, repair, troubleshooting, modifying, and maintenance of wastewater treatment plant and collection system mechanical, electrical, pneumatic, and electronic instrumentation equipment including programmable logic controllers, variable frequency drives, supervisory control data acquisition systems, software controlled units and equipment, and telecommunication systems and devices.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

Repairs, troubleshoots, installs, and maintains high voltage electrical equipment and related devices such as; transformers, power panels, wire ways, light fixtures, receptacles, disconnect switches, and motor control equipment.

Works as a member of the maintenance team and may lead the work of others in installing, testing, or repairing electrical equipment, circuits, and components; assists mechanical maintenance staff in learning basic electrical and instrumentation system installation, repair and maintenance.

Researches equipment and parts information and orders the necessary parts to maintain equipment.

Computes load balancing computations on a variety of electrical circuits; makes preliminary and post construction drawings of equipment modifications and new installations.

Dismantles, repairs and overhauls and reinstalls mechanical and electrical motors, pumps, valves, engines, blowers, pneumatic valves, laboratory equipment and air compressors.

Performs a variety of support level engineering, design and fabricating duties.

Calibrates, repairs, troubleshoots, installs and maintains electrical control systems and instrumentation such as; meters, generators, counters, regulatory clocks, monitors, recorders, programmable controllers, and telemetering systems. Creates and modifies logic programs.

Responds to night and weekend emergency call outs.

Coordinates activities with operations personnel and contractors to ensure treatment processes are not impacted.

Has direct involvement in planning the installation of new or improved electrical and electronic systems, equipment, and machinery.

Programs, installs, maintains, modifies, and upgrades software control programs which are utilized in programmable logic controllers and operator interface devices. Ability to support and troubleshoot PLC and SCADA hardware and software.

Orders necessary parts to maintain equipment; coordinates repair and maintenance work with plant operators and outside agency technical personnel.

Trains operations and maintenance staff on operation of new or modified systems. Provides technical advice, training and support to District staff.

May lead the work of others on assigned projects.

Contacts, monitors, inspects and coordinates work performed by contractors.

QUALIFICATIONS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Knowledge Of: Tools, materials, equipment and methods used in installing electrical wiring, control devices, and equipment; standard terms, practices, procedures, methods, and mathematics used in the instrumentation and electrical trades; National Electrical Code and the Electrical Safety Orders of Cal OSHA; principles of pneumatic controls and devices; telemetry and electronic installation, maintenance, operation, testing and repair, and preventative maintenance applicable to electrical and instrumentation systems; effects of hazardous chemical conditions encountered in a wastewater treatment plant; occupational hazards encountered in the course of work, and standard safety precautions and procedures; standard practices, methods and techniques used in the mechanical, plumbing and carpentry trades; principles and practices related to electrical systems and instrumentation design .

Ability To: Operate programmers, calibrators, measuring, and testing devices, hand tools, and equipment of the electrical and instrumentation trade; estimate costs, time and labor requirements; troubleshoot and diagnose problems; read and interpret technical illustrations, blueprints, maps, plans, specifications, wiring and pneumatic diagrams; work in confined spaces and safely use self-contained breathing apparatus; keep records and schedule maintenance work; establish and maintain effective working

relationships with coworkers and others encountered in the course of work; operate an office computer and use industry and office software applications; repair and maintenance of telecommunications operating systems and equipment.

EDUCATION and/or EXPERIENCE

High school diploma or general education degree (GED) and four years of journeyman level experience in the design, repair, installation and maintenance of mechanical and electrical equipment such as instrumentation systems, control panels, electronic components of data and telemetry systems, pumps, motors and valves; or an equivalent combination of training and experience.

LANGUAGE SKILLS

Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals. Ability to write routine reports and correspondence. Ability to speak effectively before groups of customers or employees of District.

MATHEMATICAL SKILLS

Ability to add, subtract, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals. Ability to compute rate, ratio, and percent and to draw and interpret graphs.

REASONING ABILITY

Ability to apply common sense understanding to carry out instructions furnished in written, oral, or diagram form. Ability to deal with problems involving several concrete variables in standardized situations.

CERTIFICATES, LICENSES, REGISTRATIONS

A valid Class C California driver's license and a satisfactory driving record.

California Water Environment Grade III Instrumentation Technologist Certificate or the ability to obtain this certificate or an equivalent certificate approved by the District within 2 years or CA Journeyman Electrician Certificate.

Ability to obtain American Red Cross First Aid and Cardiopulmonary Resuscitation (CPR) certificates.

PHYSICAL AND MENTAL DEMANDS

While performing the duties of this job, the employee is regularly required to stand; use hands to finger, handle, or feel; reach with hands and arms; talk or hear; and taste or smell. The employee frequently is required to walk; climb or balance; and stoop, kneel, crouch, or crawl. The employee is occasionally required to sit. The employee must regularly lift and/or move up to 25 pounds and frequently lift and/or move up to 50 pounds and occasionally lift/or move up to 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision,

depth perception, and ability to adjust focus.

The employee is required to occasionally work in confined spaces and other areas with potentially hazardous atmospheres requiring the use of self-contained breathing apparatus (SCBA) or respirators and in that respect is required to follow the District's facial hair policy.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly exposed to wet and/or humid conditions, moving mechanical parts, fumes or airborne particles, toxic or caustic chemicals, outside weather conditions, risk of electrical shock, and explosives. The employee is frequently exposed to vibration. The employee is occasionally exposed to high, precarious places. The noise level in the work environment is usually loud.