

## ENCINA WASTEWATER AUTHORITY

**DATE:** May 2025  
**POSITION TITLE:** Cogeneration Specialist  
**DEPARTMENT:** Technical Services  
**REPORTS TO:** Mechanical Technician Supervisor  
**FLSA STATUS:** Non-exempt

**POSITION SUMMARY:** Under the general supervision of the Mechanical Technician Supervisor or Maintenance Manager, this position: customarily and regularly works independently in performing the most complex tasks of preventative and predictive maintenance activities of the Encina Water Pollution Control Facility (EWPCF) cogeneration system, including performing tasks such as adjustments, readings, equipment start up and shutdown to meet the utility demands of Encina Wastewater Authority (EWA), strict regulatory compliance with Air Pollution Control District (APCD) permits relating to cogeneration operation, and performs other duties as assigned.

**SUPERVISORY DIMENSIONS:** This position exercises no direct supervision of staff. The incumbent of this position may oversee contractors performing tasks in the cogeneration area and may provide training and guidance to Mechanical Technician II, Mechanical Technician I, and Mechanical Technician-in-Training positions.

### **ESSENTIAL JOB DUTIES:**

The duties listed below are intended only as illustrations of the various types of work that may be performed.

- Promote the Authority's Mission, Vision, and Values.
- Exhibit all leadership traits and ethical behaviors required of California local government employees.
- Follows proper safety practices, precautions, and procedures, such as storing, handling, and transporting gases, using correct lockout and tagout procedures, using flash protection when welding, assisting in using safe rigging and welding practices, and ensures that Authority safety policies and procedures are followed and maintained during operation, maintenance, repair, and testing of power generating equipment and auxiliary systems.
- As directed, plans, schedules, and performs preventative, predictive, and reactive maintenance, inspects, repairs, installs, troubleshoots, and adjusts a variety of power generation equipment of the EWPCF cogeneration system to provide continuity of electrical generation for facility operations, meet regulatory permit requirements, and EWPCF electrical power needs safely and efficiently.
- As directed, troubleshoots, repairs, and maintains gas internal combustion engines, electrical generators, chillers, compressors, heat recovery and auxiliary equipment such as batteries, battery chargers, alternators, gas filters, water pumps, control valves, air filters, fuel control and isolation valves, centrifugal

and screw air compressors, control piping and valves, condensate refrigeration units, centrifugal pumps, plate and frame heat exchangers, shell and tube heat exchangers, and exhaust and supply fans.

- Operate and maintain a co-generation system, including plant equipment, auxiliary equipment and related support equipment.
- Perform sampling, tests and analysis on heat exchanger samples, feed water, engine oil analysis, water conditioning equipment, condensate and process water.
- Operate, monitor, inspect, maintain and adjust equipment related to the co-generation system/process including fuel collection, treatment and delivery systems, cooling systems, heat delivery systems and auxiliary equipment in both the standby and operating modes.
- Place in service and remove from service normal duty and standby equipment, generators and associated equipment, boilers, and other items as directed by management.
- For preventative maintenance and special projects, the planning process requires the Cogen Specialist to confer with Technical Services, Operations, and Safety personnel to determine needs; verify special conditions and required work practices; perform field inspections and investigations; obtain technical information, plans, sketches, and written instructions; define work scope; estimate time, labor, equipment, and material needs; define safety equipment and permits needs; ensure that parts and materials are on hand; review plans with end users; prepare required work orders; and compile and incorporate completed work documentation into the CMMS.
- Inspects, diagnoses, repairs, calibrates, and maintains a large variety of emissions test equipment; operates mobile exhaust emissions testing laboratory; installs, tunes, services and adjusts engines and catalytic converters and complete exhaust systems to ensure compliance with emissions standards, regulations, laws, and Encina's policy.
- Diagnoses malfunctions and performs minor and major repairs and overhauls on diesel, natural and biogas generators, and pumps.
- Monitor work sites and ensure adherence to safe work practices and procedures; respond to and resolve complex work related or equipment operating problems.
- Work closely with contractor personnel to monitor engine overhauls and provides technical knowledge, equipment documentation, and labor to assist with contractor efforts.
- Monitor and evaluate condition of power generation equipment and controls to ensure safe operation and evaluate life-cycle performance.
- Maintains, installs, inspects, and repairs complex piping systems of pvc, black and cast iron, stainless steel, and copper tubing; installs, removes, and repairs larger pipes and valves; draws minor new designs; modifies existing piping systems and welded steel pipe, such as nozzles and saddles; and taps, cuts, and threads pipes.
- Draws up, fabricates, and installs modifications, safety upgrades, and mechanical improvements as needed on gas engines and generators.

- Safely operate shop equipment including but not limited to lathe, mill, welder, sandblaster, bandsaw, plasma cutter, drill press. Safely operates hand and power tools required for repair work.
- Uses hand and power tools such as grinders, saws, jacks, hydraulic presses and pullers, and pipe threaders, inspects, tests, and measures equipment and material using precision instruments such as scales, height and depth gauges, calipers, verniers, and micrometers of various types.
- Plans tasks, keeps records of work performed, and provides estimates of labor and material necessary for the performance of the work. Conducts research on asset repair/replacement prices and supplies as directed.
- Interface with Operations department to facilitate preventative maintenance and/ or corrective work orders, emergency response, and other coordinated departmental activities as needed. Advise, assist, support, and interact with other Authority departments and divisions as appropriate.
- Assists in the preparation of department budgets, maintaining service records, preparing reports, making technical recommendations, and resolving action items as directed.
- Uses personal computer to perform CMMS management tasks, and specialized functions as directed.
- Originate purchase order requisitions within the framework of the Authority's purchasing policy.
- Operate Authority vehicles in accordance with EWA Vehicle Use Policy.
- Operate forklifts, utility carts, scissor lifts, aerial lifts, and other such equipment within Authority operated facilities.
- Perform general housekeeping tasks and building maintenance at Authority operated facilities.
- Interface with the public, contractors, consultants, member agencies, and vendors.
- Respond to emergencies at Authority operated facilities.
- Performs administrative tasks for the organization as needed.
- Performs other related duties as assigned.

Specific types of knowledge, skills and physical abilities required for these duties:

- Knowledge of safety practices and procedures as they apply to wastewater and water recycling treatment facilities, mechanical equipment, chemical handling, and gas management systems.
- Principles, methods, techniques, tools, and equipment used to calibrate and replace a variety of sensors including devices used for automated controls.
- Principles and practices of power generation both stationary and portable.
- Internal combustion engine emissions control theory and analysis.
- Operating characteristics of electronic components, including programmable controllers, feedback devices, and operator interface programs.
- South Coast Air Quality Management District regulations understanding.

- Advanced knowledge of the safe and proper operation of various types of hand and power tools, gas and electric cutting and welding equipment, precision measuring devices, test meters and gauges.
- Advanced knowledge of safe shop practices and ability to safely operate machine shop equipment, hand and power tools, as well as the support equipment used in wastewater facility mechanical maintenance.
- Advanced knowledge of the safe and proper operation, repair and maintenance of all mechanical, electrical, hydraulic, and pneumatic controls, equipment and systems used in co-generation systems.
- Ability to read, interpret and follow blueprints, specifications, manufacturers O&M manuals, contract drawings, equipment troubleshooting guides, illustrated parts breakdowns, assembly instructions, oil analysis, and calibration instructions.
- Ability to troubleshoot and repair complex problems in electrical switchgear; natural gas, digester gas, and diesel-fueled internal combustion engines and generators and their associated controls and monitoring systems.
- Knowledge of cranes and hoists, and ability to rig equipment for proper lifting.
- Knowledge of specialized diagnostic testing and monitoring equipment for gas engines.
- Ability to read, interpret and follow blueprints, specifications, manufacturers O&M manuals, contract drawings, equipment troubleshooting guides, illustrated parts breakdowns, assembly instructions, oil analysis, and calibration instructions.
- Ability to investigate and compile information and present it in an organized written form.
- Advanced skills in reading, writing, and arithmetic; effective verbal communication skills.
- Ability to establish and maintain cooperative working relationships.
- Ability to operate forklifts, skip loaders, cranes, and boom trucks.
- Ability to respond to 24-hour call-ins; work varying hours, weekends, holidays and days off; and perform stand-by duty as needed.
- Ability to withstand exposure to varying weather conditions, work in wet and/or odorous areas, and work in confined areas, tanks or structures.
- Ability to withstand strenuous physical activities for extended periods of time including lifting, bending, carrying, crawling and climbing.
- Ability to communicate effectively with those contacted in the course of work ensuring that courteous and professional customer service is provided.
- Ability to think and respond quickly under pressure and in emergency situations.
- Ability to work independently and safely.

**EDUCATION REQUIREMENT:** Graduation from High School or equivalent. Specialized course work in power generations systems, compressor systems, hydraulic theory, drive systems, heat exchangers, or pump operation and maintenance.

**EXPERIENCE REQUIREMENT:** Four (4) years of progressively responsible experience in the maintenance, repair, and service of mechanical or electrical equipment found in power generation systems, including two (2) years of experience in the operation and maintenance of large engine driven generators and/or blowers of a greater than one-megawatt power distribution system. Any combination of training, education, or experience that could provide the required levels of knowledge and training.

**LICENSE REQUIREMENT:** Possession of a valid California Class C Driver's License and ability to be insured under the Authority's automobile insurance coverage. Note: Failure to maintain a valid California Driver's License constitutes possible cause for termination.

**CERTIFICATION REQUIREMENT:** Possession of a valid Grade III California Water Environment Association (CWEA) Mechanical Technologist certification or the ability to obtain certification within 12 months of appointment to the position and maintenance of certification in an active status.

**PHYSICAL AND MENTAL DEMANDS:**

**Physical Demands**

While performing the duties of this position, the employee is regularly required to walk; talk or hear by telephone and in person; sit; smell; use hands to finger, handle, feel or operate objects, tools, or controls; reach and lift with hands or arms. The employee is frequently required to stand, stoop, and kneel for prolonged periods of time.

Specific vision abilities required by this job include close vision, distance vision, the ability to distinguish colors and shades, depth perception, and the ability to adjust focus. The employee must regularly lift and move up to 50 pounds.

**Mental Demands**

While performing the duties of this position, employees are regularly required to use oral and written communication skills, read documents or instructions; analyze and solve problems; observe and interpret data or information; use mathematical reasoning; learn and apply new information or skills; perform detailed work; work under changing, intensive deadlines with constant interruptions; and perform multiple concurrent tasks.

**WORK ENVIRONMENT:** While performing the duties of the job, the employee is frequently exposed to toxic or hazardous chemicals. The noise level in the work environment is quiet to loud. Hearing protection is required in some work areas.

**RESPIRATORY PROTECTION POLICY/PROGRAM REQUIREMENT:** This position must comply with the Authority's Respiratory Protection Policy & Procedures, which requires the use of respirators when conducting specific tasks.

**ADDITIONAL QUALIFICATIONS:** Possession of a good driving record and the ability to be insured by the Authority's insurance carrier; and the ability to read, write, speak and comprehend English.

**RIGHT TO WORK REQUIREMENT:** Documentation of eligibility to work in U.S. will be required as a condition of employment.

The Encina Wastewater Authority does not discriminate against any applicant for employment on the basis of age, race, color, sex, ancestry, national origin, pregnancy, marital status, sexual orientation, sexual identity, religion, military status, medical condition, mental disability, and physical disability.

The list of essential job duties contained in this job description is not exhaustive and may be supplemented as necessary. This position performs other related duties as assigned, some of which may become essential to the position.

Any offer of employment for this position is contingent upon receipt of acceptable results from a background investigation, physical examination, and drug screen.