

## LEAD POWER PLANT OPERATOR

*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 direction, leads, oversees, and participates in the work of staff responsible for the operation, inspection, maintenance, and repair of methane gas engine generators and auxiliary equipment; identifies, troubleshoots, and solves the most complex problems; oversees and participates in performing the most complex and difficult preventive and corrective maintenance and repair on power generation equipment; and performs duties as assigned.

### **SUPERVISION RECEIVED AND EXERCISED**

Receives direction from the assigned supervisory and/or managerial staff. Exercises no direct supervision of staff. Exercises technical and functional direction and provides training to lower-level staff.

### **CLASS CHARACTERISTICS**

This classification is the third of three levels within the power plant operations job series. Positions organize and oversee the day-to-day work of staff in assigned areas of responsibility and ensure that equipment, systems, and facilities in OC San wastewater treatment plants are operated and maintained in a safe and efficient manner. Responsibilities include inspecting and attending to assigned areas in a timely manner and performing a wide variety of tasks in the operation, maintenance, and repair of assigned facilities and systems. Performance of the work requires the use of considerable independence and initiative, within established guidelines. This class is distinguished from the Maintenance Supervisor in that the latter has full supervisory authority for planning, organizing, and overseeing the full scope of assigned maintenance functions.

### **EXAMPLES OF ESSENTIAL JOB FUNCTIONS** (Illustrative Only)

*The following essential job functions are typical for this classification. Incumbents may not perform all of the listed job functions and/or may be required to perform additional or different job functions from those set forth below to address business needs and changing business practices.*

- Leads, plans, trains, and reviews the work of staff responsible for the operation, inspection, maintenance, and repair of methane gas engine generators and auxiliary equipment; provides technical and safety training; provides technical direction including assessment of performance for assigned staff; reviews work orders for work to be performed, assists in developing work plans, procedures, and schedules, and coordinates personnel, equipment, and other resources needed to complete day-to-day work; covers scheduled time off for assigned staff as necessary, including performing operator work as relief staff.
- Verifies the work of assigned employees for accuracy, proper work methods, techniques, and compliance with applicable standards and specifications.

- Performs power plant rounds inspecting and monitoring general operations of OC San's power plants to ensure proper working condition; identifies, troubleshoots, and solves the most complex problems as necessary.
- Directs the oversight of and participates in generating and distributing 12,000-volt power throughout the wastewater treatment plant; directs the operation, monitoring, inspection, and maintenance of internal combustion engines, steam turbine generators, chiller refrigeration and air conditioning systems, energy steam systems, and auxiliary support and safety equipment such as pumps, compressors, fans, valves, filters, equipment drives, and motors; operates standby generators to generate electrical power in emergency situations according to utility power specifications.
- Oversees and participates in monitoring and controlling distribution of electrical power throughout the plant by either operating high voltage switchgears, making manual adjustments to equipment, or by operating computer control systems designed to monitor trends and start and stop engines; monitors a variety of computer systems including the supervisory control and data acquisition (SCADA) software program designed to control and monitor the electrical system.
- Oversees and participates in performing preventive maintenance on power generation equipment such as cleaning air filters, adjustment packings, scheduling repairs, and monitoring vibrations, chemicals, and oil.
- Performs the most complex emergency repairs on power generation equipment; operates switchgears and coordinates maintenance, isolations, shut-downs, tag outs, and start-ups of power generation equipment before and after testing, maintenance, and emergency repairs.
- Monitors, controls, and records water, oil and air pressures, temperatures, flows, gas levels, and test results by reading meters, gauges, charts, and instruments; performs water treatment tests and administers appropriate chemicals as needed per system; completes daily operating logs of routine and unusual operating or maintenance conditions encountered, complex problems identified, and any repair work performed; initiates work orders, memos, and requests for maintenance repairs.
- Gathers power and heat data and prepares operations and special reports such as the Monthly Summary of Operations; maintains assigned information systems and databases.
- Coordinates work and projects with other divisions, departments, and outside agencies.
- Oversees and participates in monitoring facility for work that needs to be addressed by other departments and generates a service request to inform appropriate personnel.
- Provides input and participates in the development and administration of assigned annual budget; estimates time, materials, and equipment required for jobs assigned; orders all parts necessary to perform maintenance and repairs; picks up, receives, stores, and inventories supplies; may operate electric crane to lift equipment and supplies.
- Ensures safety and health procedures and precautions are adhered to, corrects unsafe work conditions/practices, and/or reports unsafe work conditions/practices to assigned supervisory or managerial staff.
- Performs duties as assigned.

## **QUALIFICATIONS**

### **Knowledge of:**

- Principles of providing functional direction and training.
- Operations, services, and activities of an electrical power generation program.
- Operational characteristics of electrical power generation equipment, components, and fuel management system.
- Advanced methods and techniques of high and low voltage distribution.
- Advanced operating characteristics and application of test equipment such as computer combustion analyzer, computer vibration analyzer, dial indicator, flow balance indicator, and laser pump alignment unit.
- Advanced operational characteristics of SCADA and related control and monitoring systems.

- Advanced methods, techniques, tools, devices, and materials for performing preventive and corrective maintenance on assigned equipment.
- Advanced theories and analytical methods of water chemistry.
- Mathematical principles and calculations.
- Basic principles and practices of budget administration and cost estimate preparation.
- Principles and procedures of record keeping.
- Safety principles, practices, and procedures of all facilities, equipment, and materials used in maintaining and repairing power systems.
- Applicable federal, state, and local laws, codes, and ordinances relevant to area(s) of responsibility.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Current equipment and communication tools used for business functions and program, project, and task coordination, including computers and software programs relevant to work performed.

**Ability to:**

- Plan, organize, and coordinate the work of assigned staff.
- Effectively provide staff leadership and work direction.
- Inspect the work of assigned staff and maintain established quality control standards.
- Train assigned staff in proper and safe work procedures.
- Perform the most difficult electrical power generation duties.
- Independently perform a variety of complex troubleshooting, preventative and corrective maintenance, and repair duties on electrical power generation equipment and systems.
- Direct the inspection, troubleshooting, diagnosis, and repair of electrical malfunctions.
- Safely and effectively use and operate test equipment, hand tools, power tools, and related equipment required for the work.
- Read, interpret, and understand plans, schematics, diagrams, blueprints, and drawings.
- Identify maintenance problems and determine action required for repair.
- Make accurate mathematical calculations.
- Record data and maintain accurate logs, records and basic written records of work performed.
- Understand, interpret, and apply all pertinent laws, codes, regulations, policies and procedures, and standards relevant to work performed.
- 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 a motor vehicle and travel to various OC San sites, projects, and/or meetings.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Comply with safe work practices and procedures in the workplace.
- Provide a high level of customer service by effectively dealing with the public, vendors, contractors, and OC San staff.
- Effectively use computer systems, software applications relevant to work performed, and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Establish, maintain, and foster positive and effective 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 OC San.

1. High school diploma or G.E.D. supplemented by specialized training or coursework in electrical or electrical power generation technology or a related field.
2. Five (5) years of increasingly responsible experience in the operation and maintenance of electrical power generation equipment such as gas engines, pumps and compressors.

**Licenses and/or Certifications:**

- Must possess a valid California Class C Driver's License.

**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**

- Mobility to work in the plant; to sit, stand, and walk on level, uneven, or slippery surfaces; frequently reach, twist, turn, kneel, bend, stoop, squat, crouch, grasp, and make repetitive hand movement in the performance of daily duties; to climb and descend ladders, to operate varied hand and power tools and equipment, and to operate a motor vehicle and visit various OC San sites, projects, and/or meetings.
- Perform moderate to heavy physical work; to lift, carry, push, and pull materials and objects up to a weight of 51 pounds and occasionally heavier weights, in all cases with the use of proper equipment and/or assistance from other staff.
- Work requires entry into confined spaces and the use of confined entry equipment and protective safety equipment.
- Vision to inspect and operate equipment.
- Field work requiring frequent walking in operational areas to identify problems or hazards.
- Finger dexterity to operate tools and equipment.

**ENVIRONMENTAL ELEMENTS**

- Field work in and around facilities with exposure to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, confining workspace, heights, chemicals, mechanical and/or electrical hazards, hazardous physical substances and fumes, dust, and air contaminants.
- Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.

**OTHER REQUIREMENTS**

- May be required to work extended hours, including nights, weekends, and holidays when necessary.
- Standby and Call Back: Employees in this classification may be required to participate in standby duty and are subject to call back, which may include nights, weekends and 24-hour emergency call out with little or no notice. Any employee designated to serve on standby, or report to an emergency, and refuses to do such, shall be subject to disciplinary action up to and including termination.
- Probationary Period: All OC San employees, except classifications considered "at-will", are subject to the probationary period provisions as specified in the applicable Memorandum of Understanding, policies, and/or resolutions. Employees who have not yet successfully completed their initial probationary period serve "at-will" and may be released from employment without cause or recourse to any appeal or grievance procedures.

- Pre-Employment: All employment offers are contingent upon successful completion of OC San's pre-employment process, which includes a background investigation, a physical examination, and a drug screen.
- Work Location Assignment: Employees will be assigned to a work location based on business needs which may be located at any/all of OC San locations; this work location may be changed at any time.