



**DECEMBER 2018**  
**FLSA: NON-EXEMPT**

## **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 direct or general supervision or 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; performs the more complex advanced-journey level functions and provides training to less experienced employees; identifies, troubleshoots, and solves the most complex problems; oversees and performs routine, and preventive maintenance on power generation equipment.

### **SUPERVISION RECEIVED AND EXERCISED**

Receives direct or general supervision or direction from the assigned supervisory and/or managerial staff. Exercises no direct supervision of staff. Exercises technical and functional direction and training over assigned staff.

### **CLASS CHARACTERISTICS**

This classification is the third of three (3) levels within the power plant operations job series and serves in a lead role. Incumbents plan, lead, and review the day-to-day work of staff in assigned areas of responsibility, and ensure that equipment, systems, and facilities in District 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 within the department.

### **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; performs operator work as relief staff; provides technical direction including assessment of performance for assigned staff; reviews work orders for work to be performed; assigns and coordinates work assignments.
- Ensures established safety precautions are adhered to, corrects unsafe work conditions/practices, and/or reports unsafe work conditions/practices to assigned supervisory or managerial staff.
- Trains assigned employees in their areas of work including proper work methods, procedures, and techniques; covers scheduled time off for assigned staff as necessary.
- Verifies the work of assigned employees for accuracy, proper work methods, techniques, and compliance with applicable standards and specifications.

- Performs treatment plant rounds inspecting and monitoring general operations of the District's power plants to ensure proper working condition; identifies, troubleshoots and solves the most complex problems as necessary.
- Oversees and participates in generating and distributing 12,000 volt power throughout the wastewater treatment plant; operates, monitors, inspects, and maintains 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.
- 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 SCADA software program designed to control and monitor the electrical system.
- Oversees and participates in routine 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; coordinates and assists other divisions with repairs; 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 and any repair work performed.
- Initiates work orders, memos and requests for maintenance repairs; gathers power and heat data.
- Prepares "Monthly Summary of Operations" and special reports as required.
- Ensures adherence to safe work practices and procedures; maintains work area to ensure safety and order; 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 the Division's 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.
- Performs related duties as assigned.

## **QUALIFICATIONS**

### **Knowledge of:**

- Operations, services, and activities of an electrical power generation program and associated equipment including engines, steam turbines, boilers, feedwater systems and fuel management system.
- Principles of coaching and training.
- 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 and flow balance indicator.
- Advanced operational characteristics of SCADA systems.
- Advanced water chemistry analysis, boiler maintenance and theory background.
- Advanced preventive and corrective maintenance techniques.

- Mathematical principles and calculations.
- Construction, maintenance, and operating characteristics of wastewater treatment facilities.
- Basic principles and practices of engineering design, specification, and cost estimate preparation.
- Principles and procedures of record keeping.
- NFPA-70E (National Fire Protection Association).
- Applicable Federal, State, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Safety and lockout/tagout procedures.
- Office procedures, methods, and equipment including computers and applicable software applications such as word processing, spreadsheets, maintenance management systems and databases.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Principles and practices of customer service and techniques for effectively communicating with the public, vendors, contractors, and District staff.

**Ability to:**

- Plan, schedule, assign, and oversee activities of wastewater plant operations personnel.
- Lead, organize, and review the work of staff.
- Perform the most difficult electrical power generation duties.
- Interpret, explain, and enforce department policies and procedures.
- Perform a variety of complex repair and maintenance duties on electrical power generation equipment and systems.
- Inspect, troubleshoot, diagnose and repair the most complex electrical malfunctions.
- Operate a variety of electrical repair and maintenance equipment in a safe and effective manner.
- Use a variety of test equipment including computer combustion analyzer, computer vibration analyzer, dial indicator and flow balance indicator.
- Record data regarding power generation performance.
- Make accurate mathematical calculations.
- Read and interpret electrical drawings and specifications.
- Safely and effectively use and operate hand tools, mechanical equipment, power tools, and equipment required for the work.
- Maintain accurate logs, records and basic written records of work performed.
- Understand and follow oral and written instructions.
- Interpret, apply, explain, and ensure compliance with Federal, State, and local policies, procedures, laws, rules, and regulations.
- 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.
- Work independently in the absence of supervision
- Work extended hours, including nights, weekends, and holidays when necessary.
- Ensure adherence to safe work practices and procedures in the workplace.
- Operate a motor vehicle and travel to various District sites, projects and/or meetings.
- Effectively communicate in person, over the telephone, and in writing.
- Utilize a computer, relevant software applications and/or other equipment.
- Use tact, initiative, prudence, and independent judgment within general policy and legal guidelines.
- 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 OCSD.

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; AND
2. Four (4) years of work experience in the operation and maintenance of electrical power generation equipment such as gas engines, pumps and compressors, with two (2) years of experience performing duties at a level comparable to a Power Plant Operator II with the District.

**Licenses and/or Certifications:**

- 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.

**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.

**PHYSICAL DEMANDS**

Must possess mobility to work in the plant; strength, stamina and mobility to perform moderate to heavy physical work; ability to travel to various District sites, projects and/or meetings; ability to work in confined spaces, around machines and to climb and descend ladders, and operate varied hand and power tools and construction equipment. Vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards. Finger dexterity is needed to access, enter and retrieve data using a computer keyboard or calculator and to operate above-mentioned tools and equipment. Positions in this classification bend, stoop, kneel, reach and climb to perform work and inspect work sites. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 40 pounds, or heavier weights with the use of proper equipment.

**ENVIRONMENTAL ELEMENTS**

Employees work in the field and are exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, confining workspace, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff and/or public and private representatives, and contractors in interpreting and enforcing departmental policies and procedures.