



JULY 2012
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 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, preventive maintenance on power generation equipment; and ensures adherence to safe work practices and procedures.

SUPERVISION RECEIVED AND EXERCISED

Receives direction from the Maintenance Supervisor. Exercises technical and functional direction over and provides training of assigned staff.

CLASS CHARACTERISTICS

This is the lead-level class in the power plant operator series. Incumbents plan, supervise, 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

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.

- Lead, plan, train, and review the work of staff responsible for the operation, inspection, maintenance, and repair of methane gas engine generators and auxiliary equipment; provide technical direction including assessment of performance for assigned staff; review work orders for work to be performed; assign and coordinate work assignments.
- Train assigned employees in their areas of work including proper work methods, procedures, and techniques; cover scheduled time off for assigned staff as necessary.
- Verify the work of assigned employees for accuracy, proper work methods, techniques, and compliance with applicable standards and specifications.

- Perform treatment plant rounds inspecting and monitoring general operations of the District's power plants to ensure proper working condition; identify, troubleshoot and solve the most complex problems as necessary.
- Oversee and participate in generating and distributing 12K volt power throughout the wastewater treatment plant; operate, monitor, inspect, and maintain 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; operate standby generators to generate electrical power in emergency situations according to utility power.
- Oversee and participate 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; monitor a variety of computer systems including the SCADA software program designed to control and monitor the electrical system.
- Oversee and participate in routine preventive maintenance on power generation equipment such as cleaning air filters, adjustment packings, scheduling repairs and monitoring vibrations, chemicals and oil.
- Perform the most complex emergency repairs on power generation equipment; coordinate and assist other divisions with repairs; operate switchgears and coordinate maintenance, isolations, shut-downs, tag outs and start-ups of power generation equipment before and after testing, maintenance and emergency repairs.
- Monitor, control, and record water, oil and air pressures, temperatures, flows, gas levels and test results by reading meters, gauges, charts and instruments; perform water treatment tests and administer appropriate chemicals as needed per system; complete daily operating logs of routine and unusual operating or maintenance conditions encountered and any repair work performed.
- Initiate work orders, memos and requests for maintenance repairs; gather power and heat data for
- Monthly Summary of Operations and prepare special reports as required.
- Ensure adherence to safe work practices and procedures; maintain work area to ensure safety and order; oversee and participate in monitoring facility for work that needs to be addressed by other departments and generate a service request to inform appropriate personnel.
- Provide input and participate in the development and administration of the Division's annual budget.
- Estimate time, materials, and equipment required for jobs assigned; order all parts necessary to perform maintenance and repairs; pick-up, receive, store, and inventory supplies; may operate electric crane to lift equipment and supplies.
- Perform related duties as required.

QUALIFICATIONS

Knowledge of:

- Operations, services, and activities of an electrical power generation program.
- Principles of lead supervision and training.
- Operational characteristics of electrical power generation equipment and components.
- 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 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.
- Modern office practices, methods, and computer equipment and applications related to the work, including word processing, database, and spreadsheet applications.
- 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:

- 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 arithmetic 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.
- Operate modern office equipment including computer equipment and software 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 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 equivalent supplemented by college level course work or trade school training in electrical or electrical power generation technology or a related field; AND
2. Four (4) years of experience in the operation and maintenance of electrical power generation equipment such as gas engines, pumps and compressors, with at least two (2) years of experience performing duties at a level comparable to a Power Plant Operator II with the District.

License or Certificate:

- Possession of a valid California 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

Must possess mobility to work in the plant; strength, stamina and mobility to perform medium to heavy physical work, 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 a minimum of 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.