



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

## **RELIABILITY MAINTENANCE TECHNICIAN**

*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, performs maintenance activities related to condition-based monitoring program for plant facility and pump station equipment; assists in the development and implementation of predictive and proactive maintenance techniques, and predictive analysis methods in achieving higher equipment reliability and lower maintenance costs.

### **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.

### **CLASS CHARACTERISTICS**

This classification is a stand-alone class and not part of a job series. This class performs the full range of responsibilities for plant facility and pump station equipment reliability maintenance duties, performing the full range of maintenance and repair duties required to ensure that the District's wastewater treatment and pumping facilities, equipment, and systems are maintained in a safe and effective working condition and providing the highest level of safety. Responsibilities include using "condition-based monitoring" technologies for preventative and proactive maintenance as well as inspecting and attending to assigned areas in a timely manner. Work includes performing a wide variety of tasks in the maintenance and repair of assigned wastewater treatment facilities, equipment, and systems.

### **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.*

- Performs a wide variety of condition-based monitoring techniques surveys related to vibration data collection, infrared inspections and oil sampling on mechanical equipment, pumps, motors, compressors, blowers, gearboxes, turbines, electrical equipment, transformers, control panels, switchgear, or variable frequency drives.
- 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.
- Conducts analysis of vibration trending data, infrared inspections and oil sampling data; reviews and interprets vibration, infrared, and tribology technical data in order to make recommendations; prepares reports and provides recommendations for correction; creates service requests based on recommendations given in condition based techniques reports; performs advanced diagnostics to verify defects and failure modes; and tracks machinery defect and failure mode severing in conditioning monitoring software.
- Conducts acceptance testing on new and overhauled equipment and machinery; analyzes technical data from nameplate and the online maintenance management system; provides complete analysis and

- prepares and submits reports; compiles information and data from multiple sources.
- Assists in the configuration of the condition-based monitoring software database by entering and maintaining new equipment and updating asset case history, setting up baseline for new/overhauled machinery, and removing equipment no longer in use; reads and reviews machinery diagrams and data sheets in determining components in need of repair or replacement.
- Performs proactive techniques such as laser alignment and field dynamic balancing on new and overhauled machinery; prepares and submits reports for laser alignment and field dynamic balancing.
- Participates in development of recommendations for changes and improvements to existing maintenance standards and procedures; assists in the development and implementation of predictive and proactive maintenance techniques, and predictive analysis methods; interprets and applies administrative and departmental policies and procedures.
- Participates in developing and implementing comprehensive in-house training program on predictive maintenance technologies, such as vibration analysis, oil analysis, infrared, and ultrasound; participates in developing and implementing policies and procedures for condition-based technologies; assists other District staff with questions and issues related to functional area of assignment.
- Performs related duties as assigned.

## **QUALIFICATIONS**

### **Knowledge of:**

- Operations, services, and activities of mechanical, electrical and maintenance programs in a wastewater treatment facility and pump stations.
- Advanced level principles of operational characteristics of wastewater treatment plant systems and equipment.
- Methods and techniques for performing condition-based monitoring techniques on assigned equipment.
- Advanced methods and techniques in performing diagnostic troubleshooting services.
- Principles and techniques of condition evaluation, acceptance testing, and fault diagnosis.
- Use of an online maintenance management system in researching history and data of maintenance records.
- Office procedures, methods, and equipment including computers and applicable software applications such as word processing, spreadsheets, and databases including operational characteristics of database systems.
- Principles and practices of record keeping.
- Mathematical principles and calculations.
- Principles of basic report preparation.
- English usage, spelling, vocabulary, grammar, and punctuation.
- Principles and practices of customer service and techniques for effectively communicating with the public, vendors, contractors, and District staff.

### **Ability to:**

- Perform condition-based monitoring surveys.
- Perform analysis and report writing on condition-based monitoring techniques.
- Troubleshoot chronic equipment problems.
- Conduct condition evaluation, acceptance testing, and fault diagnosis.
- Read, interpret, and understand complex technical manuals, blueprints, drawings, schematics, and diagrams.
- Operate office equipment including computers, printers, and other peripheral equipment.
- Utilize supporting word processing, spreadsheet, and database applications.
- Perform mathematical calculations.
- Compile information and data from multiple sources.

- Prepare clear and concise reports.
- Understand the organization, operation, and services of the District and of outside agencies as necessary to assume assigned responsibilities.
- Interpret and apply administrative and departmental policies and procedures.
- Adapt to changing technologies and learn functionality of new equipment and systems.
- Understand and follow oral and written instructions.
- 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.
- Follow department policies and procedures related to assigned duties.
- Work independently in the absence of supervision.
- Work extended hours, including nights, weekends and holidays when necessary.
- Adhere 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.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, 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 conditioned based monitoring techniques or a related field; AND
2. Five (5) years of work experience applying predictive and proactive maintenance techniques on field equipment, including three (3) years in the field mechanical or electrical trades.

**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 a shop setting and wastewater treatment plants and related facilities; strength, stamina, and mobility to perform moderate to heavy physical work, to work in confined spaces, around machines and to climb and descend ladders, and to operate varied hand and power tools and construction equipment; ability to travel to various District sites, projects and/or meetings; vision to read printed materials and a computer screen; color vision to read gauges and identify appurtenances; 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 primarily indoors in a shop setting and are exposed to loud noise levels, cold and hot temperatures, vibration, confining workspace, chemicals, mechanical and/or electrical hazards, and hazardous physical substances, odors, and fumes. Employees may interact with upset staff and/or public and private representatives and contractors in interpreting and enforcing departmental policies and procedures.