



**JULY 2012**  
**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 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 general supervision from the Rebuild Supervisor. Exercises no direct supervision of staff.

### **CLASS CHARACTERISTICS**

This job class is responsible for plant facility and pump station equipment reliability maintenance duties that performs 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 provide the highest level of safety. Responsibilities include inspecting and attending to assigned areas in a timely manner and performing a wide variety of tasks in the maintenance and repair of assigned wastewater treatment facilities, equipment, and systems.

### **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.

- Perform 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, variable frequency drives, etc.
- Conduct analysis of vibration trending data, infrared inspections and oil sampling data; review vibration, infrared, and tribology technical data in order to make recommendations; prepare reports and provide recommendations for correction; create service requests based on recommendations given in condition based techniques reports.
- Conduct acceptance testing on new and overhauled equipment and machinery; analyze technical data from nameplate and the online maintenance management system; provide complete analysis, and prepare and submit reports; compile information and data from multiple sources.
- Assist in the configuration of the condition based monitoring software database by entering and maintaining new equipment, setting up baseline for new/overhauled machinery, and removing equipment no longer in use; read and review machinery diagrams and data sheets in determining components in need of repair or replacement.
- Perform, when necessary, proactive techniques such as laser alignment and field dynamic balancing on new and overhauled machinery; prepare and submit reports for laser alignment and field dynamic

- balancing.
- Participate in development of recommendations for changes and improvements to existing maintenance standards and procedures; assist in the development and implementation of predictive and proactive maintenance techniques, and predictive analysis methods; interpret and apply administrative and departmental policies and procedures.
- Participate in developing and implementing comprehensive in-house training program on predictive maintenance technologies, such as vibration analysis, oil analysis, infrared, and ultrasound; participate in developing and implementing policies and procedures for condition based technologies; assist other District staff with questions and issues related to functional area of assignment.
- Perform related duties as required.

## **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.
- Principles of basic report preparation.
- English usage, spelling, vocabulary, grammar, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing 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.
- Work independently in the absence of supervision.
- 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.
- Use English effectively to 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 OCS D.

1. High school diploma or equivalent supplemented by college level or specialized training in conditioned based monitoring techniques or related field; AND
2. Five (5) years of increasingly responsible experience applying predictive and proactive maintenance techniques on field equipment, including three (3) years of journey level experience in the mechanical or electrical trades.

**License or Certificate:**

- Possession of a valid California class C driver's license.
- Possession of a valid Level I Vibration Analysis certificate from a recognized training institution is desirable.
- Possession of a valid Infrared certification from a recognized training institution is desirable.
- Possession of a valid Tribology certification from a recognized training institution is desirable.

**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 a shop setting and wastewater treatment plants and related facilities; 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 to operate varied hand and power tools and construction equipment; 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 a minimum of 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.