

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 general supervision, performs a variety of condition-based monitoring of OC San's plant facility and pump station equipment; assists in the development of preventative and predictive maintenance plans/requirements for equipment; uses a computerized maintenance management system (CMMS) to maintain and track maintenance and repair related records; generates a variety of maintenance performance reports to optimize/prioritize resource allocation; and performs duties as assigned.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from assigned supervisory and/or managerial staff. Exercises no direct supervision of staff.

CLASS CHARACTERISTICS

This classification is responsible for performing the full range of plant facility and pump station equipment reliability maintenance duties required to ensure that OC San'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, working independently, and exercising judgment and initiative. Positions at this level receive occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit. This class is distinguished from other maintenance and operations classifications in that by using "condition-based monitoring" technologies for preventative and proactive maintenance.

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 technique surveys on mechanical equipment, pumps, motors, compressors, blowers, gearboxes, turbines, electrical equipment, transformers, control panels, switchgear, or variable frequency drives.
- Conducts analysis of vibration trending data, infrared inspections, and oil sampling data; reviews and interprets vibration, infrared, and tribology technical data; prepares reports and provides recommendations for correction based on data analysis and interpretation; creates service requests based on recommendations given in condition based techniques reports; performs advanced diagnostics to verify defects and failure modes; 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 obsolete equipment from the CMMS database; 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.
- Assists with development of preventative and predictive maintenance plans/requirements for equipment; researches manufacturer's maintenance recommendations; makes modifications suitable to OC San installation needs by field verification of special conditions; defines, compiles, and incorporates maintenance activities in the CMMS; follows up as required with adjustments to maintenance practices or in coordination with other OC San departments.
- Assists with development and implementation of a comprehensive in-house training program on predictive maintenance technologies, such as vibration analysis, oil analysis, infrared, and ultrasound.
- Interprets, prepares, and updates a variety of charts, graphs, records, correspondence, and reports.
- 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:

- 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 (CMMS) in researching history and data of maintenance records.
- Basic practices, procedures, nomenclature, methods, and terminology used in engineering or vendor drawings.
- Methods and techniques of evaluating systems data and generating reports.
- Principles and practices of record keeping.
- Mathematical principles and calculations.
- 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, inspect, and evaluate preventative/repair maintenance needs.
- Predict time frames required to complete a full range of maintenance or repair related jobs.
- Perform condition-based monitoring surveys including condition evaluation, acceptance testing, and fault diagnosis, analyze maintenance problems and evaluate alternatives, and prepare reports with recommended effective courses of action based on condition-based monitoring techniques.
- Troubleshoot chronic equipment problems.
- Read, interpret, and understand complex technical manuals, blueprints, drawings, schematics, and diagrams.
- Perform mathematical calculations.

- Maintain accurate logs, records, and basic written records of work performed.
- Operate a motor vehicle and travel to various OC San sites, projects, and/or meetings.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural 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 conditioned based monitoring techniques, mechanical, electrical, water/wastewater operations, or a related field.
2. Five (5) years of progressively responsible 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:

- 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 a standard office setting and use standard office equipment, including a computer; to operate a motor vehicle and visit various OC San sites, projects, and/or meetings; primarily a sedentary office classification although standing in work areas and walking between work areas may be required; occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information; ability to lift, carry, push, and pull materials and objects up to 35 pounds.
- Mobility to work in changing site conditions; to sit, stand, and walk on level, uneven, or slippery surfaces; to reach, twist, turn, kneel, and bend, to climb and descend ladders.
- Perform light to medium physical work; lift, carry, push, and pull materials and objects averaging a weight of 51 pounds, or heavier weights, in all cases with the use of proper equipment and/or assistance from other staff.
- Vision to read printed materials and a computer screen.
- Vision to inspect site conditions and work in progress.
- Hearing and speech to communicate in person and over the telephone.
- Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment.
- Field work requiring frequent walking in operational areas to identify problems or hazards with exposure to hazardous materials in some site locations.

ENVIRONMENTAL ELEMENTS

- Office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances.
- Field work with exposure to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, 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.