



MAINTENANCE ENGINEER

FC: 00060
PB: 05
FLSA: Exempt

PC: 724
BU: 92
Created: January 9, 2012

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DEFINITION

Performs a variety of duties in the development and administration of the Maintenance and Engineering's Preventative/Predictive Maintenance program including assisting in the overall process of maintaining materials and equipment by improving and sustaining the overall equipment reliability of the District; provides data collection and analysis to document system and equipment performance and reliability testing; determines the impact and effectiveness of operational procedures and methods; and performs related duties as assigned.

CLASS CHARACTERISTICS

Employees within this classification perform the full range of all maintenance engineering duties as assigned. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit.

EXAMPLES OF DUTIES – *Duties may include, but are not limited to, the following:*

1. Maintains oversight of Preventive/Predictive Maintenance (PM) and Condition Based Maintenance (CBM) procedures by developing engineering type solutions to repetitive equipment failures and other maintenance related problems; implements methods to reduce the need for maintenance and ultimately eliminating the occurrence of failures and assisting in the development of processes and equipment specifications enabling a comprehensive overall lifecycle cost and reliability perspective.
2. Develops partnerships and works closely with key stakeholders in and outside the organization such as Maintenance & Engineering, Rolling Stock & Shops, Operations, Material Management and Reliability Engineering on process to ensure that materials and equipment are reliable and in a state of good repair.
3. Develop and administer the Preventive/Predictive Maintenance Program by specifying and developing standard repair techniques of major repetitive tasks such as component replacements; Ensures that responsible personnel are trained in the Preventive/Predictive Maintenance Program.
4. Analyze asset histories to identify specific repetitive failures, and create a plan to address these failures.

Maintenance Engineer

Page 2

5. Regularly review assigned asset failures to determine what preventive maintenance actions may have prevented the failure, and to identify means to reduce the likelihood of repeat occurrences.
6. In conjunction with the Maintenance Planner maintains and updates a library of all standard job tasks for future reference and implementation; Periodically conducts audits of job plans to verify their effectiveness using results to apply value analysis toward the maintenance division
7. Develop standardized processes to influence new construction and equipment purchases including materials, equipment and spare parts.
8. Identify potential cost reductions through extended parts life, reducing labor costs, and other parts related improvement techniques.
9. Participate in the review phase of design of capital additions, asset purchases, and changes in plant layout to ensure full maintainability of all assets, utilities, and facilities; Carry out quality inspections on jobs.

QUALIFICATIONS

Knowledge of:

Principles, practices, methods, materials, tools, and equipment used in reliability centered maintenance.

Principles and practices of concepts related to reliability engineering.

Operational characteristics of fixed rail systems and associated equipment.

Methods and techniques of data collection and analysis.

Root Cause Analysis processes and problem solving techniques.

Concepts related to statistical, mathematical and comparative analysis.

Principles and practices of statistical record keeping and reporting.

Methods and techniques of data collection and analysis.

Principles of business letter writing and basic report preparation.

Current office equipment including computers and supporting word processing and spreadsheet applications.

Related Federal, State and local codes, laws and regulations.

Skill in:

Performing a variety of reliability engineering and analysis duties.

Collecting, compiling and analyzing data.

Conducting reliability testing on Transit System Maintenance Equipment and Facilities.

Performing statistical, mathematical and comparative analysis on equipment reliability and performance.

Analyzing problems, identifying solutions, projecting likely outcomes from proposed maintenance actions, and implementing recommendations in support of a state of good repair for all assets.

Implementation of reliability based maintenance program with emphasis on planning and scheduling, asset management, and strategic maintenance planning

Preparing a variety of technical and analytical reports.

Reading and interpreting engineering reports and documents.

Understanding and following oral and written instructions.

Communicating clearly and concisely, both orally and in writing.

Maintenance Engineer

Page 3

Establishing and maintaining effective working relationships with those contacted in the course of work.

Other Requirements:

Must possess a valid California driver's license. Must possess sufficient mobility to perform field inspection and investigations.

MINIMUM QUALIFICATIONS

Education:

A Bachelor's degree in engineering, physical sciences, mathematics, computer science or a closely related field from an accredited college or university.

Experience:

Two (2) years of (full-time equivalent) verifiable experience in the analysis of preventative maintenance system and equipment operational performance and reliability. Transit system experience is preferred.

Substitution:

Additional professional experience as outlined above may be substituted for the education on a year-for-year basis. A college degree is preferred.

WORKING CONDITIONS

Environmental Conditions:

Office environment; exposure to computer screens.

Physical Conditions:

May require maintaining physical condition necessary for walking, standing or sitting for prolonged periods of time.

BART EEO-1 Job Group: 3000 - Engineers
Census Code: 1530 - Miscellaneous Engineers
Safety Sensitive: N