





JOB DESCRIPTION

JOB TITLE: PLANT MAINTENANCE - MAINTENANCE RELIABILITY ENGINEER

REFERENCE NO: 100480

DIVISION: ENERGY & INFRASTRUCTURE

DEPARTMENT: MEDICINE HAT POWER & WATER

APPROVAL DATES: BY:  **DATE:** May 26/21
MANAGING DIRECTOR - ENERGY & INFRASTRUCTURE
BY:  **DATE:** May 21, 2021
Michelle Amos (May 21, 2021 09:16 MDT)
CHIEF HUMAN RESOURCES OFFICER

GENERAL DESCRIPTION:

This position is accountable for providing engineering support to management, operations and maintenance on a daily basis, and for design, project development, execution of maintenance, and sustaining capital projects.

ORGANIZATIONAL RELATIONSHIPS:

- Reports directly to the Manager - Engineering and Maintenance.
- Develops and maintains effective working relationships with internal Power Plant staff, other City departments and external agencies such as:
 - Original Equipment Manufacturers (OEM).
 - Corporate Insurance Agencies.
 - Alberta Boiler Safety Association.

PRIMARY FUNCTIONS/ACCOUNTABILITIES:

- Leads and conducts technical investigations and root cause analysis on critical equipment.
- Develops, revises and interprets OEM specifications and other applicable technical information.
- Provides technical support to operations and maintenance for asset lifecycle optimization.
- Acts as technical resource to projects in selection and optimization of equipment and systems.
- Works collaboratively with operating groups and OEM in developing equipment strategy including turbine major components repair and replacement frequencies, service and repair history tracking, and component end of life projections.
- Conducts and/or leads feasibility studies (technical, economical) and project scope for maintenance and sustaining capital projects.
- Prepares and /or coordinates designs, specifications, budgets, and schedules for the implementation of capital and operational equipment improvements. Liaises with consultants, contractors, equipment suppliers and plant staff to ensure successful implementation of equipment improvements.
- Provides engineering support in planning and resolving maintenance problems on a daily basis.
- Responsible for preparing Engineering Work Scope Documents including budgetary justifications for equipment alterations and plant additions.
- Assists with the preparation of operating and capital budgets, monthly cost variance reports and cash flow forecasts.
- Promotes safe working conditions and participates in all plant safety programs.
- Available for stand-by duties as required.
- Performs other related duties as required or assigned.

REQUIRED COMPETENCIES:

- Extensive knowledge of high-pressure steam boilers, steam and combustion turbines, electrical generators, balance of plant and their associated auxiliary equipment.
- Proficient in Maintenance Reliability Engineer of GE LM6000/LM2500 Gas turbines Major Components, Auxiliary Equipment & systems. (Troubleshooting, Preventive Maintenance and Corrective Maintenance).
- Thorough technical knowledge of combined cycle power generation (Steam Turbine Generators/HRSG/Power Boiler) theory and physical processes.
- Working knowledge in Alberta Pressure Equipment Safety Regulations, ASME Code (BPVC, Pressure & Power Piping Code).
- Strong knowledge of Process Safety Management principles including Management of Change (MOC), Process Hazard Analysis (PHA), Mechanical Integrity, Pre-Start-up Safety Reviews (PSSR) and Compliance Audits.
- Ability to apply economic evaluation methods to evaluate plant performance and improvement projects.
- Strong interpersonal skills to establish and maintain effective working relationships with internal and external customers.
- Proven ability to collaborate, and work effectively in a cross-functional team environment.
- Proficient in Continuous Emission Monitoring System (CEMS) Maintenance Program.
- Strong communication skills enabling clear and effective expression of ideas both orally and in writing.
- The ability to develop and implement engineering standards, procedures, and guidelines to support operational processes.
- Demonstrated strong project management skills and the ability to make decisions independently using sound judgment.
- Working knowledge of the Alberta Occupational Health and Safety Act and other relevant Federal and Provincial Legislation.
- Commitment to promoting a safe working environment for self and others.

REQUIRED QUALIFICATIONS:

- Successful completion of a Bachelor's Degree in Mechanical Engineering from a recognized post-secondary institution.
- Professional Membership in, or the ability to become a Professional Member of the Association of Professional Engineers and Geoscientists of Alberta (APEGA).
- Five (5) years of directly related experience as a Professional Engineer.
- Training in the operating principles and practices of high pressure steam boilers, steam and combustion turbine electrical generators, and their associated auxiliary equipment.
- Project Management Professional (PMP) designation considered an asset.
- Valid Class 5 driver's license with an acceptable driving record.
- An equivalent combination of management approved training and experience may be considered.