



JOB DESCRIPTION

Job Title: Mechanical Maintenance Engineer Position Number: 95-37

Incumbent: _____ Effective Date: October 2026

Employment Status: Permanent Bargaining Unit: Yes ☒ No

Supervisor's Title: Director, Mechanical Operations Department: Operations

SUMMARY

The Mechanical Maintenance Engineer plays a vital role in supporting the Operations department by ensuring the reliability, performance, and safety of mechanical assets in hydro and thermal generation facilities. This position provides technical support in both planned and unplanned maintenance, troubleshooting, and assisting with capital projects. The engineer is responsible for collaborating with many departments across Yukon Energy, such as Asset Management and Engineering to formulate strategies for long-term asset management and optimization of mechanical systems. The following is a summary of the mechanical systems at Yukon Energy:

- Hydro turbine generators and water conveyance structures
- Diesel engine generators and auxiliary systems
- LNG engine generators and auxiliary systems
- Dams, gates and valve structures
- Pumps, compressors and HVAC systems
- Cranes and hoists
- Fuel storage and transfer systems
- Pressure vessels

DESCRIPTION

Safety, Asset Reliability & Continuous Improvement

- Adhere to corporate safety standards and regulatory requirements.
- Manage and comply with YEC's Management of Change (MOC) process.
- Investigate equipment failures and perform root cause analysis.
- Analyze maintenance and reliability trends using the Enterprise Asset Management (EAM) system.
- Develop recommendations to improve maintenance practices and asset performance.
- Identify and implement business process improvements.
- Collaborate with Asset Management, Engineering, and Operations to optimize asset reliability.
- Monitor and communicate maintenance deferral risks to Operations Management.

JOB DESCRIPTION

Maintenance Planning, Execution & Technical Support

- Support short-term and long-term maintenance planning.
- Develop maintenance strategies for equipment overhauls and upgrades.
- Develop equipment test plans.
- Prioritize maintenance activities based on operational and reliability requirements.
- Review preventative maintenance (PM) records, inspection reports, and test results. Create and manage follow up work orders as required.
- Review engineering work orders and develop action plans.
- Provide technical guidance to maintenance personnel and contractors.
- Coordinate with Engineering and Maintenance Scheduling to support work execution.

Capital Projects, Asset Lifecycle & Documentation Management

- Manage small capital projects owned by the Mechanical Maintenance group, including project management duties, budget forecasting, work scheduling and site work coordination and monitoring.
- Support commissioning activities and Factory Acceptance Testing (FAT).
- Maintain and improve equipment asset data and documentation.
- Update and maintain as-built drawings and technical records.
- Support system upgrades and long-term asset renewal strategies.
- Ensure asset registry information remains accurate and complete.
- Ensure smooth transition of asset handover from other YEC departments to Operations.
- Develop maintenance plans for the Mechanical Maintenance technicians for new assets introduced through capital projects. Provide support as required to ensure correct implementation.

Contractor, Vendor & Resource Management

- Supervise contractors performing critical maintenance activities.
- Ensure contractor compliance with safety, quality, and operational requirements.
- Establish and maintain effective supplier and contractor relationships.
- Identify, document, source, and procure critical spare parts.
- Support inventory and spare parts strategies to minimize equipment downtime.
- Coordinate resources required for maintenance and project execution.

KNOWLEDGE, SKILLS, AND ABILITIES

- Registered Professional Mechanical Engineer, eligible for registration in Yukon.
- Minimum 4 years of experience in utilities, including technical and operational experience in mechanical systems.
- Strong understanding of mechanical systems and equipment present at Yukon Energy
- Experience troubleshooting mechanical systems, with sufficient knowledge to provide guidance.



JOB DESCRIPTION

- Knowledge of mechanical system condition monitoring, including vibration analysis, temperature monitoring, and non-destructive testing (NDT).
- Ability to read and interpret mechanical drawings, schematics, equipment manuals, and maintenance documentation.
- Experience supporting field infrastructure commissioning, including mechanical system installations and performance testing.
- Strong working knowledge of mechanical hazards and safety protocols in power generation.
- Ability to administer and enforce safe work practices, including creating and assessing hazard analysis documents and conducting tailboard safety meetings.
- Familiarity with control systems in mechanical applications and the ability to troubleshoot mechanical control systems.
- Solid problem-solving and analytical skills, particularly in diagnosing mechanical failures and developing corrective actions.
- Strong organizational skills with the ability to multi-task, prioritize, and optimize work schedules.
- Excellent interpersonal skills and client-service orientation, with the ability to work effectively with internal teams and external stakeholders.
- Proficiency in Windows-based software applications for work order management and documentation.
- A valid class 5 driver's license.
- A valid first aid certificate.
- Ability to work effectively in a team and diverse cultural environment.

WORKING CONDITIONS

This position works in a variety of environments, including power production plants, and office settings. Work includes outdoor environments, often in varying weather conditions, such as heat, cold, and inclement weather, to support field operations. Travel to remote communities and operational sites is required, occasionally involving extended stays.