JOB DESCRIPTION

Job Title: **Supervisor, Opertional Technology and Automation**   **Position Number:** **88-12**

Incumbent: **Vacant** **Effective Date:** **June 2025**

Status: **Permanent** **Pay Level** **10** **Bargaining Unit:** **X** **Yes** **No**

Supervisor's Title: **Director, Electrical Operations** **Department:** **Operations**

Direct Reports: **Operations Coordinator, Communincations Technologist**

SUMMARY

The Supervisor, Operational Technology and Automation is responsible for overseeing and enhancing the operational technology (OT) systems within the utility, with a primary focus on SCADA, network infrastructure, communication devices, and automation systems. This role emphasizes securing OT systems and ensuring their integration, reliability, and efficiency. The position involves optimizing OT performance, developing automation strategies, and ensuring security and compliance with all operational technology. This position works with all aspects of the Yukon Integrated System (YIS) and collaborates with personnel across many departments at YEC, as well as contractors.

DESCRIPTION

System Management
- Adhere to the Corporation's high safety standards by following approved safe working plans and ensuring compliance with safety protocols.
- Resolve unplanned OT issues, including failures or disruptions in SCADA systems, AMI infrastructure, DSM technologies, and communication networks. Investigate root causes and develop corrective action plans to prevent recurrence.
- Develop and execute short-term and long-term strategies for OT systems, focusing on upgrades, automation, cybersecurity, and cost-effective operations.
- Support integration of SCADA with Enterprise Asset Management (EAM) systems and other systems that transfer information to/from SCADA.
- Create and implement maintenance and test plans for OT assets to ensure optimal performance and reliability. Generate follow up actions as required.
- Oversee the management of OT assets, including identifying and ensuring they are being effectively managed and tracked in EAM.
- Recommend improvements to OT systems for performance optimization, security, and efficiency. Provide regular reports on OT systems to support recommendations.
- Work with YEC's Management of Change process to systematically evaluate, implement and document changes to OT systems.

Cybersecurity
- Implement and monitor OT cybersecurity measures, including secure communication protocols, firewalls, and intrusion detection systems.
- Conduct vulnerability assessments, security audits, and compliance checks with standards such as NERC CIP and IEC 62443.
- Perform regular penetration testing (pen testing) to identify vulnerabilities and enhance the security posture of OT systems.
- Work with IT to manage secure remote access to OT network assets for both YEC employees and third-party contactors.
- Work with IT to manage secure access to OT network assets for contractors working on YEC sites.

Project Leadership
- Lead OT projects, managing timelines, resources, system impacts, and budgets.
- Actively involved in the design, commissioning, and integration of capital projects related to OT systems.

Collaboration, Governance, and Documentation
- Collaborate with internal teams to align OT systems with business and operational goals.
- Participate actively in the IT/OT working group to ensure seamless integration and alignment of systems across both domains.
- Collaborate with IT teams to design and implement IT/OT network segregation strategies to enhance security and operational efficiency.
- Develop and implement OT governance frameworks, including policies, procedures, and standards, to ensure consistent and secure management of operational technology.
- Develop, maintain, and enforce OT documentation, including network diagrams and security protocols.
- Build and maintain effective relationships with vendors, contractors, and external stakeholders.
- Supervise and mentor technicians, technologists, contractors, and consultants.

EDUCATION, EXPERIENCE, SKILLS AND COMPETENCIES

Education:
- Bachelor's degree in Electrical Engineering, Computer Science, Information Technology, or a related field.
- Certifications such as:
  - Certified SCADA Security Architect (CSSA)
  - Certified Information Systems Security Professional (CISSP)

o Cisco Certified Network Associate (CCNA)
o CompTIA Network+
o Certified Wireless Network Administrator (CWNA)
o NERC System Operator Certification

Experience:
- 5+ years of experience in operational technology, automation systems, or a related field.

Skills:
- In-depth understanding of cybersecurity for OT systems, including firewalls, intrusion detection/prevention systems, and secure communications.
- Familiarity with industry standards and security frameworks (e.g., NERC CIP, IEC 62443).
- Proficiency in automation technologies, including PLCs, RTUs, and smart grid applications.
- Experience working for a power utility company and understanding of fully integrated power systems, including SCADA control systems.
- Experience with Demand-Side Management (DSM) technologies and strategies, including optimizing energy consumption, improving system load management, and integrating these technologies with operational technology systems to support real-time load balancing and predictive analysis.
- Expertise in designing and securing communication networks for OT systems.

Key Competencies:
- Excellent communication and interpersonal skills to collaborate with technical and non-technical stakeholders.
- Exceptional problem-solving and analytical skills.
- Organizational and time-management skills to handle multiple priorities.
- Knowledge of industry regulations and compliance requirements.
- Adaptability to evolving technologies and operational needs.
- Change management expertise to oversee transitions in OT systems with minimal disruption.
- Conflict resolution skills for addressing technical and interpersonal challenges within multidisciplinary teams
- Strategic thinking to anticipate future challenges and design proactive solutions.
- Crisis management skills to handle emergencies, such as system outages or cyber threats, under pressure
- Training and mentoring abilities to develop team skills and support professional growth
- A valid class 5 driver's license is required.

WORKING CONDITIONS

This position is primarily office-based with occasional travel to remote communities and operational sites including hydro and thermal generation plants, high-voltage substations, and remote utility facilities. Travel will occasionally involve extended stays. Work may involve exposure to outdoor environments and varying weather conditions. Adherence to safety protocols and the use of personal protective equipment (PPE) are mandatory during site visits. Periods of on-call coverage may be required. Responding to system events can sometimes be time-sensitive and require work in a fast-paced environment. Efficient problem solving and risk assessments will be required.