**Class Summary**

The responsibilities of this classification include performing skilled journey-level electrical work, including constructing, maintaining, and wiring a wide variety of equipment, and conducting preventive maintenance programs.

**Distinguishing Characteristics**

This is a single-level classification. Incumbents in this classification apply journey-level electrical knowledge and experience to perform electrical duties in an industrial environment.

This classification is distinguished from other electrical classifications in that incumbents install, wire, maintain, and troubleshoot various electrical and industrial electronic equipment for a wastewater treatment plant and associated facilities and systems.

**Examples of Duties**

1. Perform maintenance and repairs on low (0-1000 volts), medium (1 KV-72.5KV), and high (72.5 KV – 242 KV) voltage switchgear, transformer, and distribution systems, and power generation systems, including standby emergency generating, co-generating systems and ancillary equipment.
2. Install, maintain, troubleshoot, and perform preventive maintenance on motor control centers, including associated control devices such as relays, timers, switches, and interlocks.
3. Install, maintain, troubleshoot, and repair variable frequency and direct current drives, including adjusting speed profiles, troubleshooting repairs to component levels, and replacing when needed.
4. Install, troubleshoot, reprogram, and modify programmable logic controllers. Design and modify control circuits and related control devices and equipment.
5. Interpret displayed data, troubleshoot, maintain, and perform various distributive control systems and related hardware repairs.
6. Install, modify, and upgrade new and existing electrical systems, fixtures, and other related electrical equipment in compliance with current municipal and national electrical codes.
7. Perform preventive maintenance and repair of uninterruptible power supply equipment, including servicing and replacing batteries and other battery power sources.
8. Repair and maintain the electrical equipment and controls associated with gas systems, including gas compressors, gas drying systems, waste gas burners, flares, vaporizers, and boilers.
9. Perform thermal imaging of electrical equipment, interpret results, create reports, and repair problems.
10. Review and update program documentation and engineering drawings to facilitate coordination of maintenance efforts.
11. Schedule outages and coordinate activities. Write material requests as needed to replace defective parts and to obtain additions to the spare parts inventory.
12. Provide on-the-job training for new and other skilled trades positions.
13. Perform other duties as assigned.

**Knowledge/Skills**

Knowledge of federal electrical codes, electrical theory, and Instrument Society of America standards

Knowledge of electrical test equipment used for electrical troubleshooting, diagnosis, and preventive maintenance

Knowledge of and experience in applying safety practices for electrical (low, medium, and high) voltages, mechanical and environmental hazards such as hazardous chemicals, gasses, and confined spaces

Skill in electrical troubleshooting and diagnosis

Skill in the safe operation and primary use of hand, power, and trade tools

Skill in creating or modifying new or existing technical publications and electrical drawings

Skill in applying industry codes and guidelines in the design, installation, and maintenance of plant electrical equipment

Skill in performing essential mathematics functions, including algebra and trigonometry

Ability to work all shift schedules and required to report to work during adverse and inclement weather conditions

Ability to lift and carry equipment weighing up to 50 pounds, work in confined spaces, climb in and out of tanks using ladders, and work around noxious odors and high noise levels

Ability to effectively engage in and sustain relationships with people from diverse cultures and socio-economic backgrounds

Ability to work independently and as a team member

Demonstrated proficiency with business applications, such as Microsoft Office suite

**Education and Experience Requirements**

Three years of related journey-level experience in an industrial or manufacturing plant

Any combination of education and experience that clearly demonstrates the ability to perform the job duties of the position

**Licensing, Certification and Other Requirements**

Washington State Driver’s License

Completion of an apprenticeship program or equivalent training that clearly demonstrates journey-level status

Some licenses, certifications and other requirements determined to be necessary to meet the business needs of the employing unit may be required

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| **FLSA Designation** | Non-Exempt |
| **Service Status** | Career Service |
| **EEO Code** | 7 |
| **Levels within same series** | None |
| **Class History** | 11/1996 – Created  12/2003 – Updated  11/2007 – Updated font and format  10/2008 – Updated  03/2010 – Updated  03/2025 – Updated content |