

## CITY OF SHEBOYGAN

WASTEWATER ELECTRO MECHANICAL TECHNICIAN

Code C08230L

### Nature of Work:

Under general supervision of the Wastewater Superintendent, is responsible for the efficient and effective maintenance of Wastewater Treatment Plant and Wastewater Pump/Lift Station equipment and facilities involving the performance of skilled work normally done independently.

### Typical Duties: \* Essential Functions (These examples do not list all the duties which may be assigned.)

1. \* Troubleshoots equipment and replaces faulty mechanical, hydraulic, electrical and pneumatic components of machines and equipment.
2. \* Diagnoses cause of electrical or mechanical malfunction or failure of operational equipment and performs preventative and corrective maintenance and discusses the malfunction and repair plan with other wastewater department staff.
3. \* Repairs and maintains, in accordance with diagrams, sketches, operation manuals, and manufacturer's specifications, electrical and mechanical equipment, such as engines, motors, pneumatic tools, conveyor systems, and equipment, using hand-tools, power tools, and precision-measuring and testing instruments.
4. \* Installs electrical assemblies and hardware, and assembles wires, insulation, and electrical components, such as resistors and capacitors using hand-tools and soldering equipment.
5. \* Visually inspects and tests machinery and equipment, using electrical and electronic test equipment.
6. \* Connects power supply wires to machines and equipment, and connects cables and wires between machines and equipment, following manuals, schematic diagrams, and blueprints, using hand-tools and test equipment.
7. \* Diagnoses malfunctioning apparatus, such as transformers, motors, and lighting fixtures, using test equipment, and replaces damaged or broken wires and cables, using hand-tools.
8. \* Replaces faulty electrical components of machines, such as relays, switches, and motors, and positions sensing devices, using hand-tools.
9. \* Installs, maintains, and repairs machinery, equipment, physical structures, and pipe and electrical systems at the wastewater plant and lift/pump stations, following specifications.
10. \* Repairs and maintains physical structures of wastewater treatment plant and lift/pump stations.
11. \* Inspects, maintains, calibrates and repairs programmable logic controllers used at the WWTP and remote locations according to manufacturers' specifications.
12. May set up and operate lathe, drill press, grinder, welder and other metalworking tools to make and repair parts.
13. Tests assembled instruments for circuit continuity and operational reliability, using test instruments, such as multi-meter, oscilloscope, and electronic voltmeter.
14. Assembles and tests motor-control devices, switch panels, transformers, generator windings, solenoids, and other electrical equipment and components according to engineering data and knowledge of electrical principles.
15. May oversee the work of others assisting in the performance of assigned tasks.
16. May perform operator duties and standby duties as required to maintain plant operations.

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17. Performs all functions/tasks defined in Wastewater Maintenance Technician, and many of the functions/task defined in the Electronic Technician, and Electrician job descriptions.
18. May be required to carry a pager on a rotating basis to respond to plant emergencies after normal work hours and on holidays.
19. Performs other work as assigned.

Minimum Qualifications:

1. High School diploma or GED certificate recognized by the Wisconsin Department of Public Instruction and an Associates in Applied Science degree in Electro-Mechanical Technology or 5 years' experience as an Electro-mechanical Technician.
2. Thorough knowledge of methods, practices, materials and tools required to maintain, repair and replace mechanical, hydraulic, pneumatic, electrical and electronic equipment such as pumps, compressors, valves, electrical motors, controls, generators and similar equipment.
3. Considerable knowledge of building maintenance including HVAC systems and hot water boilers.
4. The ability to perform to a professional level, electrical and mechanical repair, and maintenance work on wastewater equipment.
5. Knowledge of electronic systems and the ability to troubleshoot problems with Programmable Logic Controllers.
6. The ability to understand and follow oral or written instructions and the ability to comprehend blueprints, shop drawings or sketches, electrical schematics and to work from these drawings.
7. Thorough knowledge of work hazards and safety procedures.
8. Ability to establish and maintain effective working relationships.
9. Ability to keep accurate records and make reports.
10. Four years experience in the repair and maintenance of mechanical, hydraulic and electrical equipment including experience in welding.
11. Must possess or be able to obtain in one (1) year Wisconsin Department Natural Resources Wastewater Operators Grade 1 Certificate in 5 or more sub-classes appropriate for the Sheboygan Regional Wastewater Treatment Plant.
12. Must possess a Journeyman's Electrician License or a Plant Electrician Licenses.
13. Must possess a valid Wisconsin Motor Vehicle Operators' License.

Modified December 2011

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