

Water Treatment Technician

Position Details

Class Code: 7230

Job Family: Skilled Trades/Technicians

Classification: Support Professional

Terms of Employment: [Pay Grade 54 on the Support Professional Salary Schedule](#)

FLSA STATUS: NON-EXEMPT

Position Summary

Under general supervision, monitors, analyzes, and tests water systems; implements preventive maintenance programs for building systems, including heating, ventilation, air conditioning, and refrigeration (HVACR), and hydronic equipment.

Essential Duties and Responsibilities

This list of Essential Duties and Responsibilities is not exhaustive and may be supplemented.

1. Performs chemical tests on water samples obtained from cooling towers, chiller condensers, boilers, and open-/closed-loop heating and cooling systems, and related subsystems.
2. Performs chemical tests on systems during cleaning; determines duration of contact with chemical cleaning agents to prevent premature erosion of system metals.
3. Tests water samples using specific procedures and equipment in cooling towers, boilers, and open/closed loop heating and cooling systems; ensures that acidity, alkalinity, and contaminant levels are within prescribed limits.
4. Calculates concentration, solution, approach temperature, and chemical treatment dosage cycles.
5. Determines type and amount of algaecide/biocide to apply to cooling towers to control or eliminate bacteria, algae, fungi, or biomass growth.

6. Calculates solution temperatures and flow of treatment solutions using test equipment.
7. Calibrates and adjusts automatic water treatment control devices to regulate chemical flows into boilers, cooling towers, and heating/cooling systems to descale and eliminate algae/corrosion.
8. Analyzes chemical test data; calibrates water treatment control devices to regulate chemical injection and concentration cycles in boilers, cooling towers, and heating/cooling systems to prevent scaling, corrosion, pitting, and microbiological growth.
9. Installs automatic feed and bleed control devices for chemical injections in boilers, cooling towers, and closed loops; includes electric motors, wiring, and associated waterlines.
10. Rebuilds sections of cooling towers.
11. Repairs/replaces tubing, fittings, pumps, valves, regulators, controls, fan belts, and pulleys.
12. Chemically/manually cleans cooling towers, condensers, or flat plate heat exchangers; determines severity of debris and proper chemical cleaning agent(s).
13. Acidizes/rods-out condensers and tube bundles to remove scale.
14. Starts/stops cooling towers, chillers, boilers, flat plate heat exchanges; blows-down boilers utilizing prescribed procedures.
15. Identifies/replaces malfunctioning components such as conductivity controller circuit boards, solenoid valves, etc.
16. Performs visual inspections and preventive maintenance on associated equipment.
17. Ensures that residual chemical inhibitors, suspended solids, chlorides, calcium, acidity, alkalinity, silica, and other contaminants are within defined limits using prescribed testing procedures.
18. Initiates requests for equipment, chemicals, test kits, and other supplies, as needed.
19. Confers with vendors regarding performance/quality of chemical supplies and equipment.
20. Prepares/maintains records, including equipment statuses, concentration cycles, residual chemicals, approach temperatures, and water pressures.
21. Responsible for the safe handling and disposal of hazardous waste relative to cooling towers, boilers, and water systems.
22. Instructs/directs Skilled Trades Assistants, when assigned.
23. Conforms to safety standards, as prescribed.
24. Performs other tasks related to the position, as assigned.

Distinguishing Characteristics

Involves skilled, technical work requiring substantial judgment and analytical ability regarding proper water treatment of industrial water systems.

Knowledge, Skills, and Abilities (Position Expectations)

1. Knowledge of safe handling practices for hazardous chemicals and waste material.
 2. Knowledge of water treatment practices/procedures.
 3. Knowledge of chemical cleaning to prevent equipment damage/corrosion.
 4. Ability to develop, learn, and apply operating procedures.
 5. Ability to recognize, understand, interpret, and apply all local, state, federal and national codes/regulations, including Occupational Safety and Health Administration (OSHA), Uniform Building Code (UBC), Uniform Mechanical Code (UMC), Uniform Plumbing Code (UPC), Environmental Protection Agency (EPA), etc.
 6. Ability to plan and organize work.
 7. Ability to safely handle and dispose various types of chemicals in accordance with material safety data sheets (MSDS), federal, state, and local jurisdictional requirements.
 8. Ability to operate hand/power tools and equipment.
 9. Ability to communicate clearly, verbally and in writing.
 10. Ability to withstand heights and perform work safely.
 11. Ability to perform heavy, strenuous, physical work.
 12. Ability to wear prescribed safety equipment.
 13. Ability to work cooperatively with employees, vendors, and the public.
 14. Ability to recognize/report hazards and apply safe work methods.
 15. Possess physical and mental stamina commensurate with the responsibilities of the position.
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Position Requirements

Education, Training, and Experience

1. High school graduation or other equivalent (i.e., General Educational Development (GED), foreign equivalency, etc.)
2. Three (3) years' experience in the operation, chemical maintenance, and control of open/closed HVACR industrial and water systems; or, Two (2) years of college, including courses in math, chemistry, biology, and water treatment, and one (1) year of experience as described above.

Licenses and Certifications

1. A valid driver's license that allows the applicant/employee to legally operate a motor vehicle in Nevada. License must be maintained for the duration of the assignment.
2. Copy of current driving history (dated within six (6) months from the date printed) issued by the Department of Motor Vehicles (DMV) at the time of application or Qualified Selection Pool (QSP) placement and at the time of interview prior to final selection.

Preferred Qualifications

None specified.

Document(s) Required at Time of Application

1. High school transcript or other equivalent (i.e., GED, foreign equivalency, etc.)
 2. Transcript(s) from an accredited college/university, if applicable.
 3. Copy of a valid driver's license that allows the applicant/employee to legally operate a motor vehicle in Nevada.
 4. Current copy of driving history (dated within six (6) months from date printed) issued by the DMV.
 5. Specific documented evidence of training and experience to satisfy qualifications.
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Examples of Assigned Work Areas

Clark County School District facilities – offices and schools (i.e., mechanical equipment rooms, boiler/chiller rooms, cafeterias, cooling towers, building rooftops, etc.)

Work Environment

Strength

Medium/heavy - exert force of 50-100 lbs., occasionally; 25-50 lbs., frequently; 10-20 lbs., constantly.

Physical Demand

Frequent sitting, standing, walking, pushing, pulling, stopping, kneeling, climbing, crouching, reaching, handling, and repetitive fine motor activities. Mobility to work in a typical office setting and use standard office equipment. Stamina to remain seated and maintain concentration for an extended period of time. Hearing and speech to communicate in person, via video conference and computers, or over the telephone. Vision: Frequent near and far acuity, and color vision. Vision to read printed and online materials, a Video Display Terminal (VDT) screen, or other monitoring devices.

Environmental Conditions

Varies from climate-controlled office settings to work outdoors with temperatures ranging from mild/moderate to extreme cold/heat. Exposure to noise levels ranging from moderate to loud for occasional to frequent time periods.

Hazards

Furniture, playground/office equipment, communicable diseases, chemicals and fumes (as related to specific assignment), and power/hand-operated equipment and machinery (as related to specific assignment.)

Examples of Equipment/Supplies Used to Perform Tasks

District-issued/personal vehicles, chemical testing kits (including hazardous and non-hazardous materials), electronic test equipment, electric hand tools (i.e., drills, saws, high pressure cleaners, air compressors, etc.), manual hand tools (i.e., wrenches, hammers, screwdrivers, knives, etc.)

AA/EOE Statement

The Clark County School District is proud to be an equal opportunity employer. The Clark County School District is committed to providing all applicants and employees equal employment opportunities without regard to race, color, religion, sex, gender

identity or expression, sexual orientation, national origin, genetics, disability, age, military status, or other characteristics protected by applicable law. Here at Clark County School District, we are a diverse group of people who honor the differences that drive innovative solutions to meet the needs of our students and employees. We believe that through a culture of inclusivity, we have the power to reflect the community we serve.

Job Revision Information

- Revised: 07/25/23
- Created: 12/01/87