



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

## OPERATIONS AND MAINTENANCE TECHNICIAN II HEATING VENTILATION AIR CONDITIONING (HVAC) (Semi-Skilled)

<b>Group-Section:</b> Water System Operations - Various	<b>FLSA Status:</b> Non-Exempt <b>Bargaining Unit:</b> AFSCME	<b>Classification:</b> Operations and Maintenance Technician <b>Salary Grade:</b> 32 <b>Job #:</b> S02
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### **JOB SUMMARY**

Learns and utilizes mechanical/electrical skills, experience, and knowledge in the practices, procedures, and methods of installing, improving, diagnosing, repairing and maintaining, both general and complex heating, ventilation and air conditioning systems.

Performs and/or assists with maintaining and improving a variety of systems including air distribution systems and machinery, heat exchangers, furnaces, hot/cold deck systems, and pneumatic and digital controls related to Metropolitan's buildings and facilities systems. Supports the operational core of water and power reliability by maintaining and improving the quality of working and operating environments within treatment plants, including ozone plants, conveyance and distribution buildings including shops, offices, occupied and unoccupied structures including communication sites and computer rooms, as well as residential and commercial systems.

Performs and/or assists with providing operational reliability, quality, capacity and energy efficiency of HVAC systems and output through a mix of general preventive and corrective maintenance skills to effectively meet or exceed customer expectations.

### **SUPERVISION:**

#### **Received:**

Work is performed with clear and detailed instructions. Close and sometimes general supervision is given to ensure proper adherence to standards, procedures, rules, and practices; deviations are referred to a supervisor or lead person. Checking for quality workmanship is accomplished on a routine basis. As the employee progresses in skill, knowledge, and experience, general supervision may be appropriate. Direction is provided on the tasks to be undertaken with some latitude to rearrange work sequences and discriminate between established practices and/or methods. Guidance on the approach to standard circumstances, tasks and activities is provided in procedures, manuals, rules, or common craft practice. A lead person or supervisor provides guidance on the approach to tasks or activities encountered in non-standard or uncommon circumstances.

Receives oversight from the Team, Unit, Section, Assistant Group, and Group Manager.

#### **Given:**

As a lead may exercise technical and/or functional direction over assigned staff.

## **JOB DUTIES**

Performs and/or assists with HVAC tasks to support the operational core of water and power reliability by effectively maintaining and improving the quality of working and operating environments within treatment plants, including ozone plants, conveyance and distribution buildings including shops, offices, occupied and unoccupied structures including communication sites and computer rooms, as well as residential and commercial systems. Employees in this title provide operational reliability, quality, capacity and energy efficiency of HVAC systems and output through a mix of general preventive and corrective maintenance skills to effectively meet or exceed customer expectations.

1. Performs and/or assists with preventive and corrective maintenance on a variety of HVAC equipment, component parts and/or auxiliary units, including pneumatic and electronic controls to ensure working and operational environments necessary for effective facility use.
2. Performs and/or assists with troubleshooting HVAC problems and determine appropriate corrective action to eliminate equipment malfunctions and ensure effective HVAC service, output, and minimize equipment down time.
3. Performs and/or assists with PMs, and CMs and improvements on HVAC equipment such as varied compressors, pumps, boilers, generators, cooling towers, fan coils, louvers, dampers, filters, pneumatic and electronic controls, blowers, solenoids, humidistats, thermostats.
4. Performs and/or assists with fabricating and installing sheet metal ducting systems and registers to provide ongoing and necessary working and operating environmental aspects.
5. Performs and/or assists with PMs, and assists with CMs, and improvements on residential and commercial equipment and systems such as ice machines, and refrigeration units to maintain proper equipment operating conditions.
6. Performs and/or assists with the operation of heating and air conditioning equipment or auxiliary units according to manuals, directions, specifications or diagnostic indications to provide HVAC output at desired and acceptable levels.
7. Reads and interprets testing and monitoring equipment performance readings including energy usage information, control signaling and feedback, as well as a variety of system output measurements.
8. Perform and/or assists with installing new or rebuilt HVAC systems and equipment and perform initial start-up procedures to place into operation, including quality checks of various gauges and instruments, as well as ensure the equipment and systems have the proper levels of power, water, lubricants, refrigerants, and air pressure needed for effective start-up and operation.
9. Performs and/or assists with providing effective preventive maintenance on a wide range of equipment of varied age, including PM of consumable parts such as filters, belts, fluids and chemicals.
10. Performs and/or assists with routine electrical and electronic diagnosis, repairs and installation related to HVAC systems such as replacing relays, programmable logic controllers, circuits, varied controls, as well as energy conservation related systems to ensure effective operation and equipment life.
11. Performs and/or assists with identifying and fabricating parts needed to effectively complete PM, CM tasks associated with HVAC systems.

## **EMPLOYMENT STANDARDS**

### **MINIMUM QUALIFICATIONS**

#### **Education and Experience:**

High school diploma or GED in addition to a minimum 2 years experience as demonstrated by practical application of techniques and practices specific to HVAC;

#### **OR**

High school diploma or GED and attainment of skills through a recognized HVAC trade training program and/or applicable related experience within an industrial environment.

Experience and knowledge as demonstrated by practical application of general techniques and practices specific to the inspection, diagnosis, repair and maintenance of HVAC and refrigeration equipment. Semi-skilled in mechanical, electrical, welding (brazing) and electronics.

**Required Knowledge of:** Employees in this title are semi-skilled and learn and utilize skills through classroom and on-the-job training or they are obtaining the necessary experience working with higher-level HVAC Technicians to competently demonstrate:

Theories, practices, tools and materials for the maintenance and repair of heating, ventilation, air conditioning and refrigeration systems, plumbing, electricity, electronics and mechanics, sheet metal fabrication, welding, water and lubricant analysis as it applies to the operation and maintenance of HVAC mechanical/electrical systems, controls and equipment, refrigerant recovery and recycling requirements of the Environmental Protection Agency (USEPA) to ensure safe and effective handling of toxic substances to ensure environmental compliance, chemicals associated with parts and HVAC system cleaning such as coil cleaners and solvents, safe operating techniques and the occupational hazards of motorized or pneumatic equipment operation, and electrically energized HVAC components, and safety practices and regulations for maintaining and repairing HVAC equipment specific to craft being performed.

**Required Skills and Abilities to:** Perform and/or assists with diagnosing malfunctions of HVAC equipment and systems (visually and/or aurally). Ability to use, operate, and troubleshoot system problems through HVAC computerized systems, including equipment and building comfort automation systems, read, interpret and develop sketches, diagrams, manufacturers' manuals, and specifications to complete installations and repair of complex HVAC systems, use and maintain electrical/mechanical tools and equipment normally and traditionally utilized in HVAC operation and maintenance, apply and guide others in adhering to safety practices and regulations for inspecting, maintaining, and repairing HVAC equipment specific to craft being performed.

### **CERTIFICATES, LICENSES and REGISTRATIONS REQUIREMENTS**

Employees in this position will be required to obtain and maintain the following certifications, licensing and registrations:

- Valid Drivers license from state of residency equivalent to a California Class C
- EPA Certification (CFR 40 part 82, subpart F) (three parts—1,2, as a minimum, or universal)

## **PHYSICAL DEMANDS/WORK ENVIRONMENT**

### **Expectations of Hours of Service:**

Employees in this position may be required to work off-shift hours to address operational needs and emergencies as required. May be required to work extended periods away from the normal reporting location.

### **Physical Demands:**

Heavy tasks may require lifting and carrying items weighing up to 50 pounds, with intermittent need to lift and carry materials and/or equipment weighing up to 100 pounds with assistance. Frequently requires pushing, pulling, turning and positioning parts, assemblies, equipment and tools weighing as much as 100 pounds with assistance. May be required to lift and move heavy items with the assistance of others and with lifting devices such as jacks, hoists and cranes of varied types and capacities. Physical effort includes frequent walking, stooping, bending, reaching, standing, kneeling and sitting for long periods of time. At times may be required to use respiratory filtration devices.

### **Work Environment:**

Work is performed indoors and outdoors at large pumping, treatment, hydroelectric or control facilities or other assets under all types of conditions, including extreme temperatures, open and confined spaces ranging from crawl spaces to sub-structures as well as varied types of terrains. Job tasks may require working from heights and functioning from lifts, hoists, scaffolds, and cranes over surfaces ranging from earthen materials to concrete, steel and water. Work activity may be frequently conducted in close proximity to exposed, electrically energized equipment including high voltage systems. The work environment frequently involves exposure to equipment and tools producing high levels of noise, as well as potentially dangerous materials and chemicals that require careful adherence to extensive safety precautions, rules and regulations.