Title: HVAC Technician

Unit: Maintenance & Operations

Job Code: E1320
Original Date: 08/1983
Last Revision: 12/2016
Staff Type: Classified
FLSA status: Non-exempt
Salary Range: 33

DEFINITION

Under the direction of the District Facilities Supervisor-HVAC/Electric plan and the Energy Management Computing Systems Operator, perform and direct semi-skilled to skilled work in the installation, repair, maintenance, and operation of the District's heating, ventilation, refrigeration, and air conditioning equipment and the District's Energy Management System (EMS).

DISTINGUISHING CHARACTERISTICS

The HVAC Technician is the experienced master journey level of the HVAC series. The HVAC Technician may act in a lead capacity, providing technical guidance and training to HVAC Mechanic and Maintenance Worker-HVAC/Electrical positions. Incumbents perform more difficult and complex technical work. The HVAC Technician is distinguished from the HVAC Mechanic either by higher technical skills and/or by lead mechanic responsibilities.

EXAMPLE OF DUTIES

1. Provide work direction and guidance to HVAC Mechanic and Maintenance Worker-HVAC/Electrical positions. Inspect subordinate's completed work, provide training of assigned workers, and assist in their performance appraisals. Provide technical resource concerning the Energy Management System.

2. Develop heating and air conditioning specifications and diagrams as necessary. Participate in the design of new equipment/system installations. Estimate labor and materials costs. Inspect work of HVAC contractors.

3. Operate a centrally-operated, computerized Energy Management System, including terminal, printers, unitary controllers, terminal modules, digital energy monitors, pneumatic output interfaces, and variable frequency drives; modify parameters through software to control heating and air conditioning equipment. Operate a wide range of complex testing devices to locate technical problems with HVAC equipment and the Energy Management System, including circuit cards and computer software.

4. Troubleshoot live 460 volt control circuits on large chiller and air conditioning systems that are interfaced with the District's Energy Management System. Install energy management hardware to control HVAC systems and equipment.

5. Recover refrigerants when refrigeration systems are open for repairs. Account for refrigerant usage.

6. Replace or repair compressors, motors, fans, valves, thermometer, and belts. Cut, thread, and weld pipes; braze and silver solder copper tubing. Install electrical conduits and perform general electrical repairs pertaining to HVAC equipment. Install and adjust switches, gauges, pneumatic thermostats, valves, controllers, and other parts as needed.

7. Monitor temperatures, pressures, and air conditioning systems operation with the District's Energy Management System. Lubricate, clean, and adjust HVAC equipment. Change air filters, clean strainers, and flush boilers, descale cooling tower tubing, and service and maintain air compressors.

8. Perform and provide water treatment on boilers and cooling towers.

9. Maintain logs and records on equipment.

10. Order parts; maintain liaison with vendors. Provide for and distribute proper supplies and equipment to project teams.

11. Perform related duties as assigned.

DESIRABLE QUALIFICATIONS

Knowledge:

- Basic training skills.
- Complex, centrally-operated, computerized energy management systems and equipment.
- Computer programs related to HVAC and Energy Management Systems.
- Environmental regulations, Montreal Protocol Section 40 CFR Part 82, Subpart F.
- EPA requirements, Title 24 (State of California), and LEED Certified Buildings and expansion of EMS.
- File maintenance and reporting.
- Health and safety regulations.
- High voltage circuits and components.
- Internal combustion engines.
- Mechanical codes pertaining to HVAC equipment.
- Operation of modern testing devises.
- Operation of vehicles, equipment, and machinery related to area of specialty.
- Oral and written communication skills.
- Proper operation of heating, ventilation, and air conditioning equipment and energy management systems.
- Proper repair procedures and safety practices.
- Reading and writing communications skills.
- Record-keeping techniques.
- Refrigerant recovery and transition.
- Refrigeration, pipefitting, sheet metal, water treatment, and energy management.
- Repair and maintenance of HVAC equipment and machinery.
- Safe work practices.
- SDGE low voltage safety training.
- State guidelines for the deferred maintenance schedule of equipment.
- Technical aspects of field of specialty.
- Time management, scheduling and coordination techniques.
- Tools, materials, methods, and terminology used in the maintenance and repair of heating, ventilation, and air conditioning equipment.

Skills and Abilities:

- Establish and maintain effective working relationships.
- Estimate the scope and cost of work assignments and select necessary tools and equipment.
- Install HVAC and electrical equipment and power systems.
- Maintain and repair heating, refrigeration, and ventilation equipment.
- Maintain, test, and repair HVAC, refrigeration, and electrical equipment.
- Operate vehicles, equipment, machinery, and tools as appropriate in area of specialty.
- Prepare and maintain records.
- Provide work direction and guidance.
- Schedule and coordinate the work of others.
- Troubleshoot High Voltage Circuits and components.
- Troubleshoot problems and adopt an effective course of action.
- Understand and follow oral and written directions.
- Use required tools and equipment skillfully and safely.

Work from sketches, drawings, and blueprints.
Work independently with little direction.
Work safely.

License:

Valid California driver's license.
As required by Clean Air Act, Refrigerant transition and recovery Type II Certification.

Training and Experience:

Any combination of training and experience equivalent to: seven years in the trade, including three years of journey level experience and leadership experience in the operation of complex, centrally-operated, computerized energy management systems and equipment.

WORKING CONDITIONS

Physical Requirements:

Category I, may require considerable physical exertion, stamina and flexibility.

Environment:

May include less desirable extremes, including some hazardous installations and service areas.

Work Day:

Persons in this class may be required to accommodate a flexible work schedule, including night work, call back, and weekends as necessary.