

## **SOUTHWESTERN COMMUNITY COLLEGE DISTRICT**

### **CLASS TITLE: CENTRAL PLANT OPERATOR**

#### **SUMMARY DESCRIPTION**

Under direction of the Maintenance Supervisor, plan, organize and coordinate the operation, maintenance, and repairs to District's central plant (s) chilled water and hot water generation and distribution systems and controls at all campuses; perform skilled mechanical work in repair, inspection, servicing, troubleshooting, and alteration of systems and associated equipment; assure central plant(s) operated to maximum efficiencies and maintained for full life expectancy of system.

#### **REPRESENTATIVE DUTIES:**

*The following duties are typical for this classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.*

1. Operate and maintain District central plant at the Chula Vista campus including multiple chillers (1000 T and greater) for the District to assure effective services; maintain prescribed standards of operations. **E**
2. Operate and maintain District chilled water systems at Higher Education Center (HEC) campuses including multiple chillers, for the District to assure effective services; maintain prescribed standards of operations. **E**
3. Communicate plant issues and keep maintenance supervisor fully informed of plant operations, unusual conditions, and faulty equipment. Communicate and document corrective action necessary to avoid malfunctions, energy excess, shutdowns, or damage of any system. **E**
4. Open and close valves as required for proper system operation and mechanical isolation. Open and close circuit breakers as required for proper system operation and electrical isolation. **E**
5. Schedule operational cycles of chillers and boilers over BacNET DDC to coincide with the academic and operational calendars of the district. **E**
6. Diagnose mechanical and electrical problems in plant equipment and systems; repair or replace defective parts or equipment. **E**
7. Perform water chemistry analysis on steam, chilled water, high temperature water, and cooling tower systems. Ensure water chemistry is within proper control ranges. Make adjustments to water chemistry, as needed, by controlling chemical feed. **E**
8. Calibrate and test central plant controls. **E**
9. Determine service and repair needs and schedule appropriate service; manage all requisition requests for vendors, prepare reports as required. **E**
10. Observe and report on operational costs (utilities, consumables) quarterly. **E**
11. Perform electrical, mechanical testing of equipment. **E**
12. Develop, write up, propose budget, and execute scheduled maintenance and preventative maintenance program for all central plant(s) equipment and systems. **E**
13. Operate a variety of tools and power equipment including electrical, air, water, Freon, and natural gas testing equipment. **E**
14. Coordinate, train and assign work of other employees; assigned to assist in maintenance, repair, and operations of central plant chilled water systems to assure optimal operation of District facilities. **E**

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15. Develop, implement, and maintain procedures for locating parts and equipment required for necessary repair and maintenance of equipment. ***E***
16. Assist in performing other skilled HVAC technical duties for package units (refrigerant DX units) as assigned. ***E***
17. Provide lead supervision and training to all assigned HVAC personnel; assign tasks and projects to plant operations staff; train staff in appropriate treatment methods and techniques; schedule staff to ensure proper plant coverage; audit and enter timesheet information for assigned employees. ***E***
18. Participate in establishing schedules and methods for providing maintenance and repair services; identify resource needs; review needs with appropriate supervisory and/or management staff; allocate resources accordingly. ***E***
19. Respond to emergency calls. Make quick analysis of mechanical and or electrical problems through proper troubleshooting techniques and use of various tools and schematics. ***E***
20. Maintain proficiency at current level and continually update knowledge through appropriate courses, seminars, publications, and contacts with others in the trade. ***E***
21. Provide expeditious, professional and courteous customer service at all times.
22. Perform related duties and responsibilities as required.

**KNOWLEDGE AND ABILITIES**

**Knowledge of:**

Central plant operations: chilled and hot water generation and distribution.

Large chiller operations and maintenance 1000 Ton and larger.

Boiler operations and maintenance.

Engineering fundamentals with respect to systems and equipment.

Proper methods, materials, tools and equipment used in the operation, maintenance and repair of HVAC and other mechanical systems.

Principles and practice of providing training and work direction.

General knowledge of building maintenance and other building trades.

Methods, practices, equipment and tools used in the installation, repair and maintenance of central plant operations.

Principles and practices of systems design and installation.

Preventive and corrective maintenance techniques.

Precautions necessary for working with high voltage.

Data communications techniques and basic programming language including graphics programming within energy management.

Interpersonal skills using tact, patience and courtesy.

Technical aspects of field of specialty.

Principles and procedures of record keeping.

Occupational hazards and standard safety practices.

Pertinent federal, state and local codes, laws and regulations including Cal/OSHA safety rules, regulations and other safe work practices.

**Ability to:**

Plan and organize HVAC services to assure maximum efficiency and comfort.

Perform skilled HVAC repair and maintenance using a variety of tools and machines. Develop and implement improved procedures and processes to maximize operational efficiency.

Provide work direction to others.

Train others in proper HVAC methods, materials and tools.

Understand and follow oral and written directions.

Work effectively in a service oriented environment subject to frequently changing priorities.

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Establish and maintain cooperative and effective working relationships with others. Meet schedules and short time lines.  
Work from blueprints, shop drawings and sketches.  
Work using high degree of independent judgment.  
Maintain records and prepare reports.  
Operate District vehicles.  
Observe legal and defensive driving practices.  
Establish and maintain effective working relationships with those contacted in the course of work.

**EDUCATION AND EXPERIENCE**

Any combination equivalent to: two years school or equivalent and four years of training or experience in cogeneration operation, power plant, chilled water plant, central hydraulic system, or boiler plant experience.

**LICENSES AND OTHER REQUIREMENTS:**

Valid California driver's license and a safe driving record.

**PHYSICAL DEMANDS AND WORKING ENVIRONMENT**

*The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.*

**Environment:** Work is performed in both indoor and outdoor field environment; travel from site to site; exposure to noise, dust, grease, smoke, fumes, electrical energy and high voltage and all types of weather and temperature conditions; work at heights; works near moving mechanical parts; frequent exposure to hazardous activities including high voltage electricity; may be required to work extended hours including evenings and weekends.

**Physical:** Primary functions require sufficient physical ability and mobility to walk, stand, and sit for prolonged periods of time; frequently stoop, bend, kneel, crouch, crawl, climb, reach, and twist; push, pull, lift, and/or carry moderate to heavy amounts of weights; dexterity of hands and fingers to operate specialized hand and power tools and equipment; operate assigned equipment and vehicles; verbally communicate to exchange information.

**Vision:** See in the normal visual range with or without correction.

**Hearing:** Hear in the normal audio range with or without correction.