



# **Silicon Valley Clean Water is accepting applications for the position of Plant Mechanic – Control Systems Technician**

\$6,624 - \$8,883 monthly depending on qualifications and experience;  
2% certification incentive pay available; benefited position;  
represented by International Union of Operating Engineers, Stationary, Local 39

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Silicon Valley Clean Water (SVCW), formerly known as South Bayside System Authority, is a wastewater treatment facility located on the western shore of San Francisco Bay which provides wastewater treatment for 220,000 residents and businesses in southern San Mateo County. SVCW opened in 1982 and plays a vital role in protecting the public health of the surrounding community as well as the environmental health of San Francisco Bay. SVCW is a joint undertaking of the cities of Belmont, San Carlos, Redwood City and West Bay Sanitary District (serving the greater Menlo-Atherton area).

## **About the Position**

Under general supervision, performs a variety of skilled electrical, electronic, pneumatic and mechanical instrumentation and controls; installation, fabrication, troubleshooting and repair of computerized automation control work at a modern wastewater treatment facilities and remote pumping stations, and assists in the development of maintenance programs for the preventive maintenance and improvements of all Instrumentation and control system

Every employee appointed to a position at SVCW shall serve at the will and pleasure of the appointing authority.

## **Knowledge, Skills and Abilities**

- Principles, practices, and methods related to monitoring and troubleshooting of various data acquisition software and hardware.
- Various PLC/HMI Hardware and associated programming software applications.
- Control systems theory and its practical application to process control and field instrumentation.
- Advanced computer programming.
- Electronic theory, work methods, tools, and precision measuring/testing equipment used in SVCW'S building maintenance, recycled water, and wastewater facilities.
- Industrial Automation Communications, Wire-less Radio, HMI, and SCADA equipment.
- Regulations pertaining to electrical & electronic installation, maintenance, and repairs.
- Electronic schematic diagrams, AutoCAD As-built drawings.
- Record keeping principles and procedures.
- Analyze programming, observe monitoring signals, troubleshoot system, understand system operation, and explain new programs to O&M staff.
- Read and understand sketches, equipment manuals, schematic diagrams, construction drawings, and P&ID drawings.
- Safely and effectively use and operate hand tools, mechanical equipment, power tools, and equipment required for the work.

- Inspect, operate, diagnose problems, and perform preventive maintenance and repair work on electronic circuits and systems; act appropriate action when failures occur.
- Plan, organize, coordinate, and oversee the work of contractors.
- Perform a variety of support for engineering, fabricating, and design duties related to wastewater systems construction, maintenance, and repair.
- Identify and take appropriate action when unusual operating problems occur.

### **Typical duties**

- From work orders, drawings, specifications, and verbal instructions, performs a variety of complex tasks troubleshooting, diagnosis of control system issues, providing solutions or corrective action to resolve the issue.
- Works as a SVCW team member in all work efforts towards the preventive maintenance, repair and installation of all facilities process systems, structures and equipment.
- Integrate new applications and modify computer programs and equipment to optimize plant operations.
- Assist O&M Staff in the use of the Agency computer control and SCADA system; provide guidance in running daily trend reports, checking control loops, validating telemetry IO points, and assuring proper computer control systems/automation.
- Provide technical support, inspection and coordination over control system modification made by contractors or in-house staff. Maintains documentation and plans of modifications.
- Work with the operations staff assisting in process changes that require SCADA or ladder logic changes in the PLC's.
- Assist in the planning, coordination and scheduling of work.
- Performs repair, maintenance, and installation work to wastewater facilities, instruments, PLC's and other related equipment.
- Assists other instrumentation technicians, mechanics, electricians, and plant staff in the performance of their work tasks.
- Maintains various wastewater plant systems and equipment, such as pump systems, SCADA systems, PLC's, network communications, electronic level, pressure and flow measuring and recording systems.
- Uses electronic monitoring and diagnostic equipment as well as other hand and power tools.
- Makes written estimates of labor, materials, and supplies required for the performance of specific assignments.
- Assures compliance with safety regulations, responds to emergencies.
- Keeps records for work and safety related data; makes verbal and written reports.
- Performs component level repairs and calibration of highly complex instrumentation and SCADA systems.
- Performs a variety of other duties as assigned.

Effectively work in a collaborative organization focused on continuous improvement; establish and maintain a positive customer service attitude and effective working relationships with internal and external customers; demonstration of strong two-way communication skills, including the ability to listen, explain and facilitate; ability to ask for input; offer help without being asked; accept suggestions; work with others to solve problems; and provide recognition and encouragement; ability to address co-workers needs; identifying issues and concerns, exploring solutions and implementing improvements.

### **Desirable Training, Education and Experience**

- High School Diploma or an equivalent certificate or diploma recognized by the State of California. Associate of Arts or Associate of Science degree with major work in instrumentation, computers and electronics.
- Minimum of one (1) year experience in skilled instrumentation maintenance work involving electrical, instrumentation, and mechanical repair and installation. Repair experience with industrial process type equipment and electrical repairs.
- Experience working in a wastewater or water facility is highly desirable.

## **Licenses and Certificates**

- License, certification or specialized training that would validate qualifications in automation and controls.
- Valid California Class C Driver's License and an acceptable driving record as defined by SVCW's Driving Eligibility Standards.
- CPR and First Aid certification desirable.

## **Physical and Sensory Requirements**

While performing the duties of this job, the employee is regularly required to walk, stand, bend, stoop, kneel, and climb. The employee frequently is required to use hands and fingers to handle or feel; reach with hands and arms; and talk and hear. The employee must regularly lift and/or move up to 25 pounds and occasionally lift and/or move up to 50 pounds.

## **Work Environment**

While performing the duties of this job, the employee regularly works in indoor and outdoor conditions. The employee works at heights, uses power tools, and works with and around machinery having moving parts. The employee is exposed to outside weather conditions, to gases, fumes and odors, and to untreated and partially treated wastewater. The employee operates light utility vehicles, including a variety of powered vehicles, forklifts and special purpose equipment. The noise level in the work environment may be moderate to loud. May be assigned, or called in, to work in the evenings, nights, and days and/or on weekends, including holiday.

## **Pre-Employment Procedures**

The selection process may consist of an evaluation of the applicant's qualifications, appraisal board interview, written examination, practical exercise and/or internal Department interviews and reference check. Upon completion of the selection process, an offer of employment may be conditionally based upon the successful completion of an employment and education verification, criminal background check, and a pre-employment medical exam.

## **How to apply –**

- Application & Supplemental Questions can be found on the employment page at [www.svcw.org](http://www.svcw.org)
- Mail or email ([jflick@svcw.org](mailto:jflick@svcw.org)) the following to SVCW, c/o Jennifer Flick, HR Director, at 1400 Radio Road, Redwood City, CA 94065
  - completed and signed application. A resume and cover letter will not be accepted in lieu of the Authority's application form.
  - completed supplemental questionnaire, and;
  - a current DMV Driver Report.

**Filing Deadline** – August 24, 2020 by 3:00 p.m. We encourage qualified applicants to apply now. Applications received after the deadline will be returned to the applicant.

**SVCW Senior Plant Mechanic - Control Systems Technician  
Supplemental Questionnaire**

1. Do you have a high school diploma or equivalent to the completion of the twelfth (12th) grade?
  - Yes
  - No
  
2. Do you have a valid drivers' license?
  - Yes
  - No
  
3. Do you have any of the following certifications? Please check all that apply or "none of the above".
  - CWEA Electrical/Instrumentation Technician Grade I
  - CWEA Electrical/Instrumentation Technician Grade II
  - ISA Certification as a Controls System Technician Level I
  - ISA Certification as a Controls System Technician Level II
  - Other form of certification as a Journeyman or Control Technician level for this position
  - None of the above
  
4. Have you completed trade school coursework in any of the areas listed below? Please check all that apply or "none of the above".
  - Industrial Electrical Control Systems
  - Industrial PLC-Based Automation Systems
  - Instrumentation Maintenance, Calibration, Troubleshooting
  - Automated Control Systems
  - Industrial Power Electronics
  - Variable Frequency Drives
  - Electronic Reduced Voltage Soft Starters
  - Battery Based Power Systems
  - Solar Power Control Systems
  - Analytical Instrumentation
  - Process Instrumentation, including Pressure, Level, and Flow
  - HVAC Components, Software, Sensors, and Controllers
  - None of the above
  
5. How many years of experience do you possess in maintaining, troubleshooting, installing and repairing a wide variety of industrial process control systems, Industrial Instruments, Analytical Instruments, Programmable Controls, and other automation components.
  - 2 or more years
  - 1-2 years
  - Less than 1 year
  - No experience
  
6. How many years of experience do you have working at a water, wastewater treatment or similar industrial facility?
  - 3 or more years
  - 1-3 years
  - Less than 1 year
  - No experience

7. Please describe your experience working at a water, wastewater treatment or similar facility. If you do not have experience, please answer N/A.
8. Do you have experience working with a Computerized Maintenance Management System (CMMS) (e.g. Lucity, INFOR, Hansen, Datastream, Maximo, EMaint, etc)?
- Yes
  - No
9. Do you have experience working on the following types of systems? Please check all that apply or “none of the above”.
- Security systems
  - Fire alarm systems
  - Environmental control systems
  - Power monitoring systems
  - Variable Frequency Drives (VFD's)
  - None of the above
10. How many years of experience do you have maintaining, installing, troubleshooting or repairing SCADA, PLCs or telemetry systems?
- 3 or more years
  - 1 - 3 years
  - Less than 1 year
  - No experience
11. Briefly list your experience with software programs such as Wonderware, Rockwell PLC Programming Software, etc. Include the type of software, how long used and where you gained the experience.
12. Do you have experience working with the following forms of documents? Please check all that apply or “none of the above”.
- Process and Instrument Diagrams (P&ID's)
  - Loop Drawings
  - Control Schematics
  - Ladder Logic Drawings
  - None of the above
13. SVCW Maintenance Technicians have a 30-min unpaid lunch each day. We offer 2-work schedules with the day beginning at 6:00am. What would be your preferred schedule?
- 5 – 8-hour days
  - 4 – 10-hour days
14. Which of the following software applications are you currently proficient in?
- Microsoft Excel
  - Microsoft Word
  - Microsoft SharePoint
  - CAD – Any Versions
  - PLC Programming – Any

HMI Programming – Any, Including Level of Proficiency as High, Moderate, Low, Basic only

HMI Name: \_\_\_\_\_ Proficiency: \_\_\_\_\_

HMI Name: \_\_\_\_\_ Proficiency: \_\_\_\_\_

None of the above

Other

If Other, briefly describe: \_\_\_\_\_

15. Industrial Networking: Describe your basic capability applied to Industrial Networking.

802.3-2018 IEEE Standards for Ethernet

- Highly Proficient
- Moderately Proficient
- Basic Proficiency
- Basic knowledge or none

Rockwell Ethernet / IP Industrial Ethernet

- Highly Proficient
- Moderately Proficient
- Basic Proficiency
- Basic knowledge or none

Rockwell Device Level Ring (DLR)

- Highly Proficient
- Moderately Proficient
- Basic Proficiency
- Basic knowledge or none

Modbus TCP / Modbus Serial (RTU)

- Highly Proficient
- Moderately Proficient
- Basic Proficiency
- Basic knowledge or none

16. Industrial Electronic Metering, Tools, Methods: Describe your basic capability applied to Industrial Measurements, Methods, and Calibration Tools.

Pneumatic Pressure Calibration and Troubleshooting

- Highly Proficient
- Moderately Proficient
- Basic Proficiency
- Basic knowledge or none

Pressure and Level Transducer Setup, Calibration, and configuration

- Highly Proficient
- Moderately Proficient
- Basic Proficiency
- Basic knowledge or none

Analytical Instrumentation Setup, Calibration, and configuration

- Highly Proficient
- Moderately Proficient
- Basic Proficiency
- Basic knowledge or none

Flow Metering Spool / Flow Interface Electronics – Setup and configuration

- Highly Proficient
- Moderately Proficient
- Basic Proficiency
- Basic knowledge or none