

JOB DESCRIPTION AND POSITION CLASSIFICATION

CLASSIFICATION Associate Control Engineer		DWR POSITION NUMBER 2743-3659-002/006	SAP POSITION NUMBER 50043887/50002008	MCR 1
APPOINTEE Vacant		SAP PERSONNEL NO. TBD	DIVISION/SECTION O&M/Protection & Integration Section	
COLLECTIVE BARGAINING IDENTIFIER Management Related BU: <input type="checkbox"/> Supervisory Related BU: <input type="checkbox"/> Confidential Related BU: <input checked="" type="checkbox"/> Rank and File BU: R09				
RESPONSIBILITIES EXERCISED <input type="checkbox"/> Supervisory <input type="checkbox"/> Lead Person		IMMEDIATE SUPERVISOR (Print) Eric Lundquist	SUPERVISOR'S CLASSIFICATION Senior Control Engineer (Supv)	
APPROVED BY (Personnel Analyst's Name) Estevez Contreras			DATE 03/27/2026	
<i>Percent of Time</i>	<i>Activity</i>			
25%	<p>POSITION SUMMARY Under direction of the Manager, Protection Unit, the incumbent will provide expertise in Protection and Control systems engineering, implementation, and maintenance practices. Perform engineering studies and analysis such as fault analysis, protective device coordination, and arc-flash studies, with mitigations, in accordance with department standards, manufacturer recommendations, North American Electric Reliability Corporation (NERC) Reliability Standards, and industry standards, such as Institute of Electrical and Electronics Engineers (IEEE), National Fire Protection Association (NFPA), etc. to optimize protection of DWR facilities. The incumbent is afforded considerable latitude for independent judgment, and frequently provides team leadership and technical direction to Field Division (FD) Engineers and Hydroelectric Power Utility (HEPU) Technicians regarding MM-29 compliance.</p> <p>ESSENTIAL FUNCTIONS This position requires that the incumbent work in the field for some phases of a project, work cooperatively with others, and maintain regular, consistent, and predictable attendance. The incumbent must possess good written, verbal, and interpersonal communications skills, in addition to good analytical skills, and be able to exercise good judgment. The specific essential duties include, but are not limited to:</p> <p>Independently assess and document the protection system requirements for Relays, Instrument Transformers, Intelligent Electronic Devices (IEDs), Real-Time Automation Controllers (RTACs), Digital Fault Recorders (DFRs), Supervisory Control and Data Acquisition (SCADA), etc. Develop the physical design incorporating safety, reliability, and minimizing Total Cost of Ownership (TCO). Using AutoCAD, develop the following demolition and construction drawings as needed: As-builts, Panel layouts, Single-lines, Three-lines, Schematics, and Connection Diagrams. Develop a complete Bill of Materials (BOM) and panel specifications, as required. Coordination with FD Engineering, Control System Branch, and Communication Branch to ensure all requirements are documented including data transmission and interfaces. This may require extensive travel throughout the State by air or vehicle.</p>			
SUPERVISOR'S STATEMENT: I HAVE DISCUSSED THE DUTIES OF THE POSITION WITH THE EMPLOYEE.				
SUPERVISOR'S NAME (Print) Eric Lundquist		SUPERVISOR'S SIGNATURE ➤		DATE
EMPLOYEE'S STATEMENT: I HAVE DISCUSSED WITH MY SUPERVISOR THE DUTIES OF THE POSITION AND HAVE RECEIVED A COPY OF THE DUTY STATEMENT.				
EMPLOYEE'S NAME (Print) Vacant		EMPLOYEE'S SIGNATURE ➤		DATE

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25%	<p>Independently develop or review studies, and develop relay settings for an automatic, computerized protection and control system for SWP facilities such as motors, generators, transformers and transmission facilities. Engineering Study development (fault, coordination, arc-flash, etc.) may require utility coordination, site data collection, knowledge of applicable standards and references (NFPA, IEEE, NERC, etc.), and expertise in applicable software packages (Aspen OneLiner, EasyPower, Mathcad, etc.). Develop Relay settings using information from studies, physical design parameters, DWR technical guides, and sound engineering judgment. Document settings in Mathcad, store in the Aspen Relay Database, and export to an electronic settings file in the specific manufactures native format (SEL AcSELEerator, etc.). Mapping of relay protective elements and control logic will be documented in an AutoCAD logic diagram. Program and administer protection and control systems using appropriate digital logic techniques. Work proactively with CSB on SCADA interface, data transmission, and data interface equipment, as well as alarming and documentation requirements.</p>		
25%	<p>Support the FD engineers and technicians, as needed, for maintenance and repairs to ensure the reliability of DWR's protection systems. For new construction and retrofits, support commissioning and maintenance testing by developing commissioning test plans, provide engineering support/training during commissioning, ensure that completed test reports comply with DWR and NERC standards, maintain the Aspen Relay Database and communicate missing or upcoming protection system testing requirements. Using analytical tools such as event reports, and real time monitoring systems such as Sequence of Events (SOEs,) DFR data, plant historian, annunciator data, relay targeting, and model data, the engineer will determine if relay actions or lack of actions were appropriate for a given system fault. Recommend corrective actions to rectify hardware and software failures. Misoperations will be documented, communicated to compliance personnel, and mitigated through settings or design changes as appropriate.</p>		
20%	<p>Develop and/or review protection system procedures to meet SWP and NERC Standards. These may include settings technical guides, processes, maintenance requirements, etc. When appropriate, collaborate and communicate with FD personnel to ensure that new policies/procedures are understood and implemented. On an as needed basis, provide theoretical and/or hands-on training to other engineers, operators, and technicians.</p>		
5%	<p>Provide regular written status updates and reports to Branch management to assure the coordinated efforts of Branch staff. Prepare concise written documentation, reports, task descriptions, work plans, work/effort estimates, and correspondence. Must also be able to represent Protection Branch at field locations in the SWP.</p>		
	<p>KNOWLEDGE, SKILLS, AND ABILITIES Maintain working knowledge of DWR polices: OP-2 Safe Clearances, Code of Safe Work Practices, policies relating to Protection and Control, etc. Maintain knowledge of the functions, responsibilities, procedures, and NERC Reliability Standards with respect to Protection and Control. Effective written and oral communication. Ability to plan, schedule, organize, and control projects using Microsoft Project. Ability to prepare contract specifications and design drawings</p>		

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	<p>using CAD. Ability to read engineering schematics, drawings, and diagrams. Strength and ability to push, pull, move and/or transport up to 25 pounds; stamina and ability to bend, stoop, kneel, and crawl; climb stairs and uneven (sometimes steep) slopes while carrying equipment; and mobility to walk unassisted throughout the facilities of the State Water Project.</p> <p>SPECIAL REQUIREMENTS Must be willing to work sometimes outside of normal business hours, travel, and stay overnight in various locations throughout the State of California. Travel throughout the State by air and on public roadway may be required for extensive periods of time. Must be able to operate computers. Employee is required to successfully complete all safety training related to the functions of the job. All employees are responsible for contributing to an inclusive, safe, and secure work environment that values diverse cultures, perspectives, and experiences, and is free from discrimination.</p> <p>Under the provisions of the North American Electric Reliability Corporation Critical Infrastructure Protection Standard CIP-004 as part of the Energy Policy of 2005, this position has authorized cyber access to or unescorted physical access around critical cyber assets and is subject to a satisfactory background check prior to appointment and every seven years thereafter.</p> <p>The Department of Water Resources is committed to its mission and employees, and we are grounded in our commitment to public safety. Regular, consistent, and predictable attendance is essential to the successful performance in this position.</p> <p>OTHER REQUIREMENTS This position provides necessary support to the Divisions of Flood Management, Safety of Dams, Operations and Maintenance, Engineering, and/or the Public Affairs Office during Governor declared emergencies, flood, dam, SWP, and other incidents and emergencies. Additionally, this position may participate in emergency operations in the capacity of area teams, field inspection, coordination, and assist agencies such as Cal OES and FEMA in disaster work, including performing fieldwork to complete damage survey reports for droughts, flooding, earthquakes, and other emergencies. This position may also serve in one of the sections as established in the Incident Command System to assist the Department in performing its emergency preparedness, response, recovery, and mitigation functions. These functions are established in the California State Emergency Plan and the Department's Administrative Orders.</p>		