

JOB DESCRIPTION AND POSITION CLASSIFICATION

CLASSIFICATION Hydroelectric Plant Technician II (SDS)		DWR POSITION NUMBER 2220-3729-085	SAP POSITION NUMBER 50002071	MCR 1
APPOINTEE Vacant		SAP PERSONNEL NO.	DIVISION/SECTION O&M/OFD/Engineering Branch/HEP Tech Section	
COLLECTIVE BARGAINING IDENTIFIER Management Related BU: ☐ Supervisory Related BU: ☐ Confidential Related BU: ☒ Rank and File BU: R12				
RESPONSIBILITIES EXERCISED ☐ Supervisory ☐ Lead Person		IMMEDIATE SUPERVISOR (Print) Bryan Hayes		SUPERVISOR'S CLASSIFICATION HEP Technician Supervisor
APPROVED BY (Personnel Analyst's Name) Jennifer Greathouse			DATE 8-21-26	
<i>Percent of Time</i>	<i>Activity</i>			
25%	POSITION SUMMARY: Under the direction of a Hydroelectric Plant (HEP) Technician Supervisor with guidance from the Hydroelectric Technician III, the incumbent safely performs the complex technical work on control, communication, electrical and mechanical equipment in connection with the operation and maintenance of State Water Project (SWP) generating/pumping plants, switchyards, water conveyance, and facilities. ESSENTIAL FUNCTIONS: This position requires that the incumbent work cooperatively with others, maintain regular, consistent, predictable attendance and exercise good judgment. Must be able to use electronic devices such as a mobile tablet to gather data and capture documentation while performing preventative maintenance work on equipment throughout the state water project. Use mobile tablet to perform routine SAP functions such as time recording, reservations, and work order notifications. The specific essential duties for items in the equipment summaries include, but are not limited to, the following: Troubleshooting and repair: Analyze, trouble-shoot and diagnose Hardware and Software failures on equipment, systems and related components utilizing knowledge of proper operations and performance levels, fault isolation procedures, appropriate tools and test equipment, system isolation and safety procedures, technical documentation, drawings and schematics so that the failed equipment or component can be isolated and identified for repair or replacement. Identify appropriate materials, equipment and procedures to safely repair and restore equipment and system to operations, including testing and validation.			
SUPERVISOR'S STATEMENT: I HAVE DISCUSSED THE DUTIES OF THE POSITION WITH THE EMPLOYEE.				
SUPERVISOR'S NAME (Print) Bryan Hayes		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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Hydroelectric Plant Technician II (SDS)		2220-3729-085		50002071	1
APPOINTEE		SAP PERSONNEL NO.	DIVISION/SECTION		
Vacant			O&M/OFD/Engineering Branch/HEP Tech Section		
Percent of Time	Activity				
25%	Installation and testing: Perform physical installation and testing of equipment, cables, system level assemblies, stand-alone components, sensors, transducers, protection devices and other components used for protection, support, monitor and control within the SWP Power and Water facilities according to specifications, installation instructions, documentation packages, drawings and other related information to make electrical, mechanical and system connections and configuration settings. Tasks include following instructions and procedures; determining required materials, tools, equipment, assemblies, safety procedures, and personal protective equipment (PPE) to perform installation and testing; set-up and configuration of test equipment and materials required for installation, calibration, testing and validation of alarms, annunciators, point settings, system function, trip circuit, and correct equipment operation ; read and interpret documentation packages, drawings, and procedures for installation, reconfiguration and testing; perform calculations to obtain data, ranges and parameters to validate test and operation; interpret and analyze test and equipment readings to determine appropriate action.				
25%	Maintenance and calibration: Perform preventative maintenance, modifications, calibration, upgrades on equipment and systems to ensure the highest degree of reliability and availability. Maintain test sets, instrumentation, and tools to support calibration and maintenance of equipment. Thoroughly inspects, cleans, performs electrical and mechanical checks, and observes equipment/system operations to validate proper functionality.				
10%	Configuration and software updates: Follow procedure and instructions to configure equipment and functional parameters to meet required operations design. Apply software updates to correct vulnerabilities and ensure operation at required version level.				
10%	Training: Participate in an on-going HEP technician cross training program to ensure understanding and ability to perform work and maintenance on Supervisory control and data acquisition (SCADA), Communications, instrumentation, IT, and power equipment used in the various types of SWP facilities.				
5%	Documentation: Document and record calibration and testing results; equipment settings, test levels and operation ranges; updates drawings or equipment records to reflect as installed equipment and systems; maintain records of installed equipment and asset inventory, spares inventory , equipment repair history, software updates, and equipment modifications; prepare and update test reports and procedures, requisitions for materials, tools, and services.				
	EQUIPMENT SUMMARY - Essential function work performed on below equipment includes but is not limited to:				
	1) Supervisory control and data acquisition (SCADA) equipment including host servers, work stations, programmable logic controllers, sequence of event loggers, front end processors, communication interfaces and gateways, and application software.				

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	2) Communication equipment including various types of high speed data multiplexors, Ethernet based components, fiber optic cable, copper cable, transceivers, protocol converters, T1 interfaces, various Local area network (LAN) and Wide area network (WAN) equipment including wireless access points, leased telco services, voice, data and video networks. 3) SWP Information technology (IT) related equipment including personal computers, work-stations, servers, video surveillance systems, security and alarm systems, video-conference systems, and voice systems with digital and analog telephones. 4) SWP plant and water conveyance instrumentation, devices and systems used for protection, monitoring, data collection and control - including relays, programmable logic controllers, signal conditioners, power line carriers, sensors and transducers for thermal, flow, level, vibration, down thrust, and pressure. 5) SWP Generating and pumping plant equipment including power transformers, power circuit breakers, high voltage instrument transformers, governors, excitation/voltage regulators, predictive monitoring systems, annunciators, hydraulic/pneumatic systems, safety systems. SPECIAL REQUIREMENTS: 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. This position requires the incumbent to have: 1) the strength and ability to move and transport heavy equipment or material up to 50 lbs; 2) the stamina and ability to bend, stoop, kneel, and stretch to access, test or install cables, equipment or materials; 3) the stamina and ability to climb 25 foot ladders, long flights of stairs, scaffolding, and towers, to access, test or install cables, equipment or materials; 4) the ability to identify color-coded parts, indicator lights, CRT display data, hazard warning tags, and warning barrier tapes; 5) the ability to work in confined spaces; and 6) the manual dexterity to use hand tools, operate control panels, equipment keypads and for delicate component or printed circuit board repair. This position requires working around loud machinery. This position requires the incumbent to: 1) work alone and as part of a team; 2) willing to work extended hours and on weekends as needed to support restoration of operations; 3) follow safety precautions inherent in the job. Required to attend the Division's OP-2 class and be certified as a worker and/or switch person, in compliance with State Water Project regulations. This is a sensitive position and is subject to substance abuse testing set forth in California Department of Human Resources (CalHR) Regulations 599.960-599.966.			

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	Must possess a valid California Driver License to travel from plant to plant and within the State Water Project, including driving a vehicle on public roadways will be required. Employee is required to successfully complete all safety training related to the functions of the job. Under the provision 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. This position is not eligible for telework. OTHER RESPONSIBILITIES: 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 CalOES 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.			

JOB DESCRIPTION AND POSITION CLASSIFICATION

CLASSIFICATION Hydroelectric Plant Technician I (SDS)		DWR POSITION NUMBER 2220-3728-x8x	SAP POSITION NUMBER 50002071	MCR 1
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COLLECTIVE BARGAINING IDENTIFIER Management Related BU: ☐ Supervisory Related BU: ☐ Confidential Related BU: ☒ Rank and File BU: R12				
RESPONSIBILITIES EXERCISED ☐ Supervisory ☐ Lead Person		IMMEDIATE SUPERVISOR (Print) Bryan Hayes		SUPERVISOR'S CLASSIFICATION HEP Technician Supervisor
APPROVED BY (Personnel Analyst's Name) Jennifer Greathouse				DATE 8-21-26
<i>Percent of Time</i>	<i>Activity</i>			
	POSITION SUMMARY: Under close supervision of an Hydroelectric Plant (HEP) Technician Supervisor with guidance from the HEP Technician III, the incumbent performs routine and basic tasks on control, communication, electrical and mechanical equipment in connection with the operation and maintenance of SWP generating/pumping plants, switchyards, water conveyance, and facilities.			
	ESSENTIAL FUNCTIONS: This position requires that the incumbent work cooperatively with others, maintain regular, consistent, predictable attendance and exercise good judgment. Must be able to use electronic devices such as a mobile tablet to gather data and capture documentation while performing preventative maintenance work on equipment throughout the state water project. Use mobile tablet to perform routine SAP functions such as time recording, reservations, and work order notifications. The specific essential duties for items in the equipment summaries include, but are not limited to, the following:			
20%	Troubleshooting and repair: Assist with analyzing, trouble-shooting and diagnosing hardware and software failures on equipment, systems and related components utilizing knowledge of proper operations and performance levels, fault isolation procedures, appropriate tools and test equipment, system isolation and safety procedures, technical documentation, drawings and schematics so that the failed equipment or component can be isolated and identified for repair or replacement. Participate in identifying appropriate materials, equipment and procedures to safely repair and restore equipment and system to operations, including testing and validation.			
20%	Installation and testing: Assist with performing physical installation and testing of equipment, cables, system level assemblies, stand-alone components, sensors, transducers, protection devices and other components used for protection, support, monitoring and control within the SWP power and water facilities according to specifications, installation instructions,			
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SUPERVISOR'S NAME (Print) Bryan Hayes		SUPERVISOR'S SIGNATURE ➤		DATE
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Percent of Time	Activity			
cont'd	documentation packages, drawings and other related information to make electrical, mechanical and system connections and configuration settings. Tasks include following: instructions and procedures; determining required materials, tools, equipment, assemblies, safety procedures, and personal protective equipment (PPE) to perform installation and testing; set-up and configuration of test equipment and materials required for installation, calibration, testing and validation of alarms, annunciators, point settings, system function, trip circuit, and correct equipment operation; read and interpret documentation packages, drawings, and procedures for installation, reconfiguration and testing; perform calculations to obtain data, ranges and parameters to validate test and operation; and interpret and analyze test and equipment readings to determine appropriate action.			
20%	Maintenance and calibration: Independently performs routine tasks and assist HEP Technician II's on difficult tasks performing preventative maintenance, modifications, calibration, upgrades on equipment and systems to ensure the highest degree of reliability and availability. Performs route maintenance on test sets, instrumentation, and tools to support calibration and maintenance of equipment. Thoroughly inspects, cleans, performs electrical and mechanical checks, and observes equipment/system operations to validate proper functionality.			
20%	Configuration and software updates: Follow procedures and instructions to configure equipment and functional parameters to meet required operations design. Assists and learn applying software updates to correct vulnerabilities and ensure operation at required version level.			
10%	Documentation: Document and record calibration and testing results; equipment settings, test levels and operation ranges; updates drawings or equipment records to reflect as installed equipment and systems; maintain records of installed equipment and asset inventory, spares inventory, equipment repair history, software updates, and equipment modifications; prepare and update test reports and procedures, requisitions for materials, tools, and services.			
10%	Training: Participate in an on-going HEP Technician series cross training program to ensure understanding and ability to perform work and maintenance on SCADA, Communications, instrumentation, IT, and power equipment used in the various types of SWP facilities.			
	EQUIPMENT SUMMARY - Essential function work performed on below equipment includes but is not limited to:			
	1) Supervisory control and data acquisition (SCADA) equipment including host servers, work stations, programmable logic controllers, sequence of event loggers, front end processors, communication interfaces and gateways, and application software.			
	2) Communication equipment including various types of high speed data multiplexors, Ethernet based components, fiber optic cable, copper cable, transceivers, protocol converters, T1 interfaces, various Local area network (LAN) and Wide area network (WAN) equipment including wireless access points, leased telco services, voice, data and video networks.			

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	SWP Information technology (IT) related equipment including personal computers, work-stations, servers, video surveillance systems, security and alarm systems, video-conference systems, and voice systems with digital and analog telephones. 4) SWP plant and water conveyance instrumentation, devices and systems used for protection, monitoring, data collection and control - including relays, programmable logic controllers, signal conditioners, power line carriers, sensors and transducers for thermal, flow, level, vibration, down thrust, and pressure. 5) SWP Generating and pumping plant equipment including power transformers, power circuit breakers, high voltage instrument transformers, governors, excitation/voltage regulators, predictive monitoring systems, annunciators, hydraulic/pneumatic systems, safety systems. SPECIAL REQUIREMENTS: 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. 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. This position is not eligible for telework. This position requires the incumbent to have: 1)the strength and ability to move and transport heavy equipment or materials up to 50 pounds; 2)the stamina and ability to bend, stoop, kneel and stretch to access, test or install cables, equipment or materials; 3)the stamina and ability to climb 25 foot ladders, long flights of stairs, scaffolding, and towers to access, test or install cables, equipment or materials; 4) the ability to identify color-coded parts, indicator lights, CRT display data and hazard warning tags, and warning barrier tapes; 5) the ability to work in confined spaces; and 6) the manual dexterity to operate control panels, equipment keypads and for delicate component or printed circuit board repair. This position requires working around loud machinery. This position requires the incumbent to: 1) work alone and as part of a team; 2) willing to work extended hours and on weekends as needed to support restoration of operations; and 3) follow safety precautions inherent in the job. Required to attend the Division's OP-2 class and be certified as a worker and/or switch person, in compliance with State Water Project regulations. This is a sensitive position and is subject to substance abuse testing set forth in California Department of Human Resources (CalHR) Regulations 599.960-599.966.			

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	Must possess a valid California Driver License to travel from plant to plant and within the State Water Project, including driving a vehicle on public roadways will be required. Employee is required to successfully complete all safety training related to the functions of the job. Under the provision 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. OTHER RESPONSIBILITIES: 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 CalOES 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.			