

Employee Name:



San Diego State University

MPP / Staff Position Description

HUMAN RESOURCES USE ONLY

Conflict of Interest (COI) Designated: Yes No

Mandated Reporter: Limited General N/A

Review Date:

MPP Positions Only

MPP Job Code:

Job Family:

Job Function:

Job Category:

Mandated Reporter Per CANRA YES NO

The person holding this position is considered a 'mandated reporter,' under the California Child Abuse and Neglect Reporting Act (CANRA) and is required to comply with the requirements set forth in CSU Executive Order 1083 as a condition of employment.

Please Note: A current and accurate signed Position Description is required for each MPP / Staff position and must be on file in the Center for Human Resources. After completion, the Position Description should be reviewed, signed and dated by the employee, the supervisor and the Center for Human Resources - Classification and Compensation.

Please check one:

New Position

Existing Position Update

Date:	8/22/2024
Department & Division:	Facilities Services/ Business and Financial Affairs
Employee Name <i>(leave blank if vacant):</i>	
Current Classification & Grade:	Operating Engineer (6703)
FLSA Status: <i>(exempt or non-exempt)</i>	Non-exempt
Working Title:	Operating Engineer
Position Number & Job Code:	10008966 & 6703

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Working Title & Position Number of HEERA Designated Appropriate Administrator:	10005857 / Chief Engineer
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I. FUNCTION OF THE EMPLOYING UNIT:

State the basic purpose of the Department/Unit in one brief paragraph. Include the division's DEI statement here.

The Division of Business and Financial Affairs is responsible for ensuring a safe, productive campus environment while providing the highest quality service in support of academic excellence through thoughtful stewardship of financial, technological, infrastructure and human resources at San Diego State University.

SDSU Facilities Services (FS) is a customer-service based organization providing facility maintenance activities through a transparent and deliberate process. It is responsible for the operation, maintenance, repair, renovation, remodel, and alteration activities in support of the academic and research mission of the university. Facilities Services employs approximately 250 employees and supports approximately eight million square feet of buildings (including residence halls and parking structures) and 280 acres of improved and unimproved land.

II. PURPOSE OF POSITION:

State the basic purpose of the position in one to three specific statements.

Operating Engineer, Power Plant – Under general direction, incumbent operates, services and performs maintenance activities following appropriate safety procedures on various mechanical equipment such as gas turbines, generators, gas compressors, air emission systems and water purifiers in a campus power plant; operates and performs maintenance on other related power plant equipment such as boilers, diesel or gas reciprocating engines, and other mechanical auxiliary equipment; monitors instrumentation gauges for operating problems; operates and monitors the power plant's computer-based management system as it interfaces with the Energy Management System (EMS); endeavors to coordinate the operation of power plant equipment in order to produce the optimum amount of energy in the most cost-effective manner; and performs other related duties as required.

Provides a thorough and accurate accounting of time and materials. Completes all routine work assignments and performs all additional duties as assigned. Incumbent maintains equipment and a safe and clean working environment. Consistent meeting of university needs in a timely and professional manner with increasingly improved skill. Follow-up on every project or task to ensure that all items are completed to the satisfaction of the FS Associate Director. Maintains a responsible attendance record, punctuality and consistent meeting of deadlines. Builds and maintains internal and external customer satisfaction with the products and services offered by the organization. Seeks feedback, is responsive to stakeholders and takes appropriate action for the situation.

Performs work in a manner that supports and facilitates the work of others in Facilities Services and the university community. Maintains a positive and cooperative working relationship with members of the department and campus community by practicing individual dignity, using tact and diplomacy, and always being respectful and civil. Utilizes respectful communication when dealing with people in all situations, demonstrating restraint, fairness, and firmness. Works effectively to understand by carefully listening and

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working to be understood. Demonstrates restraint, fairness, and firmness with all people in all situations.

Must be able to effectively communicate and successfully interact with a variety of individuals in a diverse environment at all levels of the organization. Ability to maintain confidentiality and work appropriately within the department hierarchy. Communicates effectively to resolve problems and Operating Engineer proactively resolve conflicts or disagreements in the workplace, makes suggestions and ask pertinent questions to facilitate effective communication.

Must be able to perform strenuous physical work while using mechanical aptitude and motor coordination. Ability to implement safety procedures, resolve problems and improve safety in the workplace. Works to instill in others the importance of workplace safety rules and regulations and takes appropriate actions. Ability to conduct hazard assessments, address hazards appropriately and apply controls as appropriate to address/mitigate hazards; promptly follow-up on health and safety risks, taking appropriate action(s) and providing necessary reports and documentation.

Incumbents provide a proactive and comprehensive preventive maintenance program for the University. Participates in the efficient and successful completion of projects while respecting the learning environment and the educational mission of the university. Responds to emergencies to protect life-safety, property, the educational mission, and the reputation of San Diego State University.

III. CHANGES IN RESPONSIBILITIES:

- N/A

IV. MAJOR RESPONSIBILITIES:

Clearly list the major responsibilities/essential functions in descending order from the most important to the least important. Indicate the approximate percentage of time spent in each (percentages should not be less than 5%). The percentage must total 100%.

Description of Responsibilities:	(%) Percent of Time
Power Plant Operation – Responsible for operating, maintaining, repairing, inspecting, monitoring and documenting (as necessary) mechanical equipment such as gas turbine engines, gas compressors, waste heat boilers with economizers, package or built-up water tube boilers with or without economizers, diesel/natural gas reciprocating engines, boiler feed and condensate water systems, cooling towers and systems, reaerating feed water tanks, boiler feed and condensate pumps, boiler feed water and condensate return systems, 12-volt starter battery packs, electrical switch gears, reverse osmosis water purification systems, deionized NOX water systems, automatic water softeners, fuel oil supply and transfer systems, air compressors and systems and similar apparatus; and performs preventive and corrective maintenance on such equipment. The campus has 15 MW of generation capacity including two Taurus 60 gas turbines and	70%

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Description of Responsibilities:	(%) Percent of Time
<p>one steam turbine. Incumbent will operate and maintain steam/water boilers, 5 HP through 1,000 HP and all associated equipment. The incumbent will maintain hourly records of all functions. Assists in the operation, maintenance, repair and inspection of heating, air conditioning, refrigeration, ventilation, and water treatment equipment as it pertains to cogeneration or power systems. Examples include: heating hot water boilers, chillers, condensers, compressors, circulating water pumps, blower fans, valves, ducting, gauges and manhole covers; and may also render emergency repairs to steam, natural gas, water and air systems and oil distribution systems, and maintaining overall cogeneration plant and heating hot water chemical chemistry and sampling. Incumbent is also responsible for proper electrical switchgear operation, distribution of the electrical system and the electricity produced by the power plant, in addition to the proper transfer from on-station usage to alternate users.</p> <p>May repair and replace bearings, shafts, seals, rings, and electrical wiring in the installation of central system parts, gauges, valves and pipes which require the application of appropriate specialized skills and knowledge. Monitors instrumentation gauges for natural gas leaks, turbine and generation bearing temperatures, turbine and generator vibration, resistivity of deionized water and liquid/gas fuel valve positions; tests, adjusts and calibrates boiler and turbine control systems; makes sophisticated balance and vibration checks on gas turbine engine, diesel engine and gas compressor; operates, calibrates and maintains the oxygen trim systems on package boilers; monitors and checks natural gas pressures from the main distribution system; monitors electrical loads; and follows established safety procedures in performing all duties. Samples and treats fuel oil by introducing additives as prescribed by dosage charts; make visual observations of turbine exhaust in order to evaluate and correct exhaust to maintain acceptable emission levels. Operates the power plant's computer-based management system as it interfaces with the main Energy Management System (EMS); monitors computer functions to start, stop and control the kilowatt output of the generator through electrical control systems; and interprets input/output energy calculations and equipment efficiency calculations.</p>	
<p>Preventive Maintenance Work and Emergency HVAC Work– Maintains, troubleshoots and tests central plant and HVAC installations; performs PM tasks. Responds to trouble calls and work requests; troubleshoots and repairs or adjusts air flow, temperature, humidity balances (for buildings, building areas and individual rooms); repairs leaks in distribution systems (steam, natural gas, water, etc.); switches plant to manual operation when circumstances dictate (i.e. power interruption).</p>	15%

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Description of Responsibilities:	(%) Percent of Time
Documentation - Interprets plans and drawings; prepares working sketches; calculates shop estimates, estimates material costs; obtains phone quotations and prepares requisitions for ordering material, takes inventory of bench stock material and re-orders when necessary. Maintains records and retrieves data related to work performed using manual/computerized record-keeping systems; prepares standard reports; consults and works with other trades workers.	5%
Optimization and Sustainability – Identifies opportunities to improve the operation of the central plant; analyzes plant data; with support of Assistant Director, makes changes to operational procedures and helps gauge impact; looks to improve overall sustainability of plant operation in line with campus policies and best practices.	5%
Maintenance and Operation of Shop and General Support – Maintains and services tools and equipment used in the performance of duties; performs shop clean-up and maintains a safe and clean work area. Assists Custodial Services, Landscape Services, other trades and Mechanical Services staff in the accomplishment of their work (projects, events, on-going programs), and performs other tasks as assigned by the manager in support of the university and Facilities Services.	5%
Total =100%	100%

V. LEAD WORK DIRECTION OVER OTHERS:

List of individuals the incumbent supervises/leads. Indicate the type of supervision, whether direct (directly supervises the position and conducts performance evaluation) or general (acting in a lead capacity or assigning work).

Classification	Working Title	Type of work direction (Direct or General)

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VI. POSITION REQUIREMENTS:

A. *List education and years of experience required that are based on the classification standards.*

- Equivalent to two years of hands-on experience in the operation, maintenance and repair of boiler and chiller systems, cogeneration systems, and/or related mechanical equipment.
- Completion of a certificate or other vocational training may be substituted for hands-on experience.

B. *Skills, knowledge, and abilities required for this position that are based on the classification standards*

Knowledge: Work requires thorough knowledge of combustion gas turbines, steam turbine generators, air emission systems, Feedwater pumps, Steam, condensate, heating hot water , and cooling towers water chemistry and chemical treatments, air compressor system, heat recovery steam generators, cooling towers, Lube oil sumps and closed fluid cooling system, heating hot water boilers and high pressure steam boilers running at 125psi; thorough knowledge of the methods, materials and tools used in the operation of applicable systems; working knowledge of system water testing and treatment procedures; and working knowledge of applicable building automation systems and interfaces.

Abilities: Must be able to operate boilers and chillers safely and efficiently; quickly identify and correct malfunctions; monitor energy consumption and adjust equipment and system features; operate computer based energy management systems and interfaces with main building automation system; read, interpret and work from blueprints, manuals, diagrams and operating procedures; estimate cost, time and materials of projects; maintain logs and records; retrieve data related to work performed using manual and/or computerized record-keeping systems; prepare standard reports; provide instruction to unskilled assistants; analyze and respond appropriately to emergency situations; read and write at a level appropriate to the position; and perform arithmetic calculations as required by the position.

Ability to work unsupervised on a variety of job tasks from simple to complex; perform strenuous physical work; utilize mechanical aptitude and motor coordination; read and write at a level appropriate to the position; follow simple written and oral instructions; work independently or as a member of a team; consult and work with other trades workers; develop and maintain effective working relationships; analyze situations, procedures and work methods and exercise appropriate judgment in resolving problems and establishing priorities and work methods; be flexible and respond to changes in demands for service and priorities.

C. *Specialized skills required for this position*

Must have the ability to analyze, respond appropriately to emergency situations and to recognize, secure and report unsafe conditions immediately. Must have knowledge of safe working techniques and safety equipment and must be aware of the typical hazards of the workplace as well as the special hazard that may be encountered (biohazards, chemicals, asbestos/lead containing materials).

Must have ability to understand and apply university and departmental policies and procedures.

D. *License and Certification Required (I.e., Driver's License and Grade, Certification, etc.)*

- Valid California Driver's License.
- Steam Engineer License, City of Los Angeles (may be required within 2 years of employment).
- Building Operator Certification, Level I (may be required within 3 years of employment).


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VII. PREFERRED QUALIFICATIONS:

- Five years of experience in the operation, maintenance and repair of boiler, chiller and cogeneration systems or related mechanical equipment
- Turbine Endorsement, City of Los Angeles
- Building Operator Certification, Level II

VIII. SIGNATURES:

The signature indicates position description is an accurate and correct statement of duties and responsibilities assigned to the position. (Limited to 3 Signers as listed below)

Incumbent's Signature/Acknowledgment		Date
 Ramez Elsalman (Sep 17, 2024 08:24 PDT)		Sep 17, 2024
Appropriate Administrator Signature		Date
Classification & Compensation Services		Date

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Attachment A

Complete for all positions

To comply with the provisions of the Americans with Disabilities Act, specify the physical, mental, and environmental conditions of the essential functions of the job, please complete the sections below.

Physical Summary: Choose one description out of the categories below that best describes this position.

- Sedentary Work:** Involves mainly sitting. Walking and standing are minimal. Lifting is limited to lightweight objects (10 pounds or less).
- Light Work:** Job involves some lifting of medium weight objects (10-20 pounds) and/or 10% -20% of the job involves standing or walking.
- Medium Work:** Job involves lifting heavy-weight objects (20-40 pounds) and/or 20%-40% of the job involves standing, squatting, kneeling, or walking. May require pushing or pulling objects within the weight limits.
- Heavy Work:** Job involves lifting more than 40 pounds. Approximately half of the incumbent's time will be spent walking, standing, squatting, kneeling, or climbing.

Use the codes below for each of the items which most accurately describe the extent of the specific activity performed in this position.

"C" = constantly or 6-8 hours per day

"F" = frequently or 3-6 hours per day

"O" = occasionally or up to 3 hours per day

"N" = never

Physical Requirements of the Position		Mental Requirements of the Position	
O	Bending (neck)	F	Reading & Comprehending
O	Bending (waist)	F	Writing
O	Climbing	O	Performing Calculations
N	Crawling	C	Communicating Orally
O	Kneeling	F	Reasoning & Analyzing
F	Pushing/Pulling	F	Decision Making
O	Sitting	O	Directing/Coordinating Others:
O	Squatting		Other:
F	Standing	Environmental Working Conditions	
O	Twisting (neck)	F	Exposure to variations in temperature/humidity
O	Twisting (waist)	O	Exposure to chemicals, gases, dust or fumes
F	Walking	F	Operates machinery or drives motorized equipment
F	Handling Objects	O	Exposure to bio-hazards
F	Manual dexterity	F	Working in normal office environment
O	Reach above/below shoulder	F	Working outside with various weather conditions
O	Using foot controls	O	Uses specialized equipment
	Other:		Other:

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Attachment B

Complete for all positions

Sensitive Position: For current employees who are voluntarily reassigned or reclassified to a sensitive position, a background check is also required. To determine if this position is a sensitive position, please consult with Human Resources and reference the [CSU Background Check Policy](#).

Consideration for designation as a sensitive position per HR Technical Letter 2017-17		
1. Does this position have responsibility for the care, safety, and security of people (including children and minors), animals, and CSU property?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sexual offender registry check for those who perform work involving regular or direct contact with minor children and those who are identified as mandated reporters of child abuse and neglect under Executive Order 1083 and California Penal Code §11165.7(a).
2. Does this position have access to and responsibility for detailed personally identifiable information about students, faculty, staff, or alumni that is protected, personal, or sensitive?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Access to Level Protected Level 1 Data: (i.e., Passwords, DOB, Credit Card Numbers, SSN's, Medical Data, Law Enforcement Records, etc.) - Link to or incorporate ICSUAM pages.
3. Does this position have access to student records?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	FERPA (Access to student education records)
4. Is the position responding for recording/reporting Clery Data?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Clery Act Basics
5. Does the position have access to protected health information?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	HIPAA
6. Will this position be an active/participating member of the SDSU Emergency Operations Team?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	EOC Member
7. Does this position have responsibility for operating commercial vehicles, machinery or equipment that could pose environmental hazards or cause injury, illness, or death?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Motor Vehicle Records/Licensing Check is required. CA Defensive Driver
8. Does the position influence or make decisions regarding real property, real property acquisitions and/or leaseholds, land use and/or development?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	COI CAT 1
9. Does the position influence or make decisions regarding the purchase of goods, service or construction work? Note: Having a procurement card is not qualifying if the individual is limited to making directed and supervised purchases from established vendors.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	COI CAT 2

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10. Does the position influence or make decisions regarding the investment of SDSU/CSU funds.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	COI CAT 5
11. Does the position influence or make decisions regarding the sale of campus goods, services, products, or commodities (including agricultural commodities), which are sold by the campus?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	COI CAT 6

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Attachment C

Complete for **MPP Positions Only**

Mental Effort:

Enter frequency of occurrence for all applicable activities using the following key:

1=Never Occurs 2=Seldom Occurs 3=Sometimes Occurs 4=Occurs Often 5=Almost Always Occurs

<u>Planning</u>		<u>Staffing</u>	
	Forecast		Define Roles
	Set Program Goals		Give Input to Position Descriptions
	Determine Budget Allocations		Determine Selection Criteria
	Establish, Implement, Revise Policies		Recruit/Interview/Select
			Orient Staff
<u>Organization</u>		<u>Employee Relations</u>	
	Describe Relationships Between Functions		Initiate Corrective Action
	Define Department/Divisional Structure		Authorize Formal Discipline
	Establish Priorities to Meet Goals		Administer Collective Bargaining Agreements
	Schedule Work for Employees		Prepares/Investigates Grievance Awards and Complaints
	Implement procedures		Formulates/Represents University Position for Formal Grievances/Complaints
	Determine work methods		
	Balance multiple tasks/projects		
<u>Direction/Leadership/Supervision</u>		<u>Performance Evaluations</u>	
	Educate		Determine Performance Standards
	Delegate		Authorize/Approve Awards
	Coordinate		Prepare Performance Evaluations
	Coach/Train/Develop		Observe/Follow-Up on a Daily Basis
	Recommend Formal Training		Correct Work/Behavior Problems
	Motivate		
	Instruct/Demonstrate		
	Schedule Staff/Readjust Schedule		
<u>Organization</u>		<u>Other</u>	
	Describe Relationships Between Functions		
	Define Department/Divisional Structure		
	Establish Priorities to Meet Goals		
	Schedule Work for Employees		
	Establish deadlines		
	Implement procedures		
	Determine work methods		
	Balance multiple tasks/projects		

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Attachment D

Department Organization Chart

Instruction: Please insert an image of your department's organization chart and highlight where this Position Description falls within the chart.

