

Attachment A

City of Stockton

PLANT MAINTENANCE MECHANIC SENIOR PLANT MAINTENANCE MECHANIC

Established:	Unknown
Resolution:	Unknown
Spec Adopted:	9/20/01
Resolution:	CS01-101
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Ratifying Resolution:	CS07-165
Spec Amended:	03/18/10
Ratifying Resolution:	CS10-008
Spec Amended:	06/16/11
Ratifying Resolution:	CS11-019
Spec Amended:	
CS Status:	Classified
Unit:	O & M
FLSA Status:	Non-Exempt

Formerly Mechanical Maintenance Worker
I/II and Plant Equipment Mechanic

DEFINITION

Performs a variety of mechanical installation, repair, maintenance and modification work at either the wastewater or water treatment plant (hereinafter referred to as treatment plant) and related pumping station facilities; and performs related work as assigned.

CLASS CHARACTERISTICS

Entry level

Initially, under close supervision learns a wide range of mechanical maintenance duties at a the wastewater treatment plant and related pumping station facilities.

Journey level

Under general supervision, incumbents are fully competent to perform a wide range of mechanical maintenance duties at a the wastewater treatment plant and related pumping station facilities.

Senior level

Under supervision, incumbents provide lead direction to crews engaged in plant mechanical maintenance activities by passing on instructions received from the supervisor; distributing work; Assigns, directs, and reviews Assigns, directs, and provides input for reviews; monitoring status of work; and reviewing the work of staff engaged in a variety of mechanical maintenance work; and/or performs highly skilled installation, repair, maintenance, and modification work on internal combustion natural gas engines/generators and large (i.e. 750 kilowatts and above) industrial stationary engines, machinery, pump engines, motors, generators and related equipment at a the wastewater treatment plant and related pump stations.

PRINCIPAL DUTIES (Illustrative Only)

All levels

- Performs troubleshooting, repair, maintenance, installation, and adjustment work to a variety of treatment plant facilities.
- Performs basic to complex maintenance, inspection, and repair or overhauling tasks on drive components, such as right angle drive gears, reduction drives, variable speed, belt and chain drives.
- Overhauls, maintains, installs, adjusts, inspects, and repairs a variety of hydraulic and pneumatic systems and compressors.
- Performs basic preventative and corrective maintenance by isolating power, grounding wires, troubleshooting problems, making repairs, restoring power and checking for proper operation.

Journey level

- Starts and stops equipment and adheres to lock out and tag procedures.
- Performs basic to complex maintenance and repair tasks on engines, such as changing oil, belts, and spark plugs; replaces filters; obtains oil and fuel samples; takes hydrometer readings of coolant and battery fluids.
- Properly uses and cares for hand and power tools such as grinders, saws, jacks, hydraulic presses, pullers, and pipe threaders; inspects, tests, and measures equipment and material using precision instruments such as scales, height and depth gauges, calipers, verniers, and micrometers of various types.

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- Repairs, maintains, installs, inspects, troubleshoots, and adjusts a variety of mechanical equipment at treatment facilities. Equipment includes: sluice gates, compressors, and flights; hydraulic controls; mechanical, structural, and plumbing apparatus; belt, chain, and conveyors; internal combustion engines as well as related cogeneration equipment.
- Maintains, installs, inspects, and repairs a variety of pumps, such as centrifugal, positive displacement, and screw; services, lubricates, and adjusts chemical feed and processing equipment; determines excess wear and pump efficiencies; and follows preventive and predictive maintenance practices.
- Performs basic to routine maintenance and repair tasks on engines, such as changes oil, belts, and spark plugs; replaces filters; obtains oil and fuel samples; and takes hydrometer readings of coolant and battery fluids.
- Maintains, installs, inspects, and repairs piping systems of PVC, black and cast iron, stainless steel, and copper tubing; installs, removes, and repairs larger pipes and valves; draws minor new designs; modifies existing piping systems and welded steel pipe, such as nozzles and saddles; and taps, cuts, and threads pipes.
- Performs basic maintenance, inspection, and repair tasks on mechanical and electrical drive components.
- Welds and fabricates the less complex parts and fittings; makes assemblies and repair units used in maintenance work from work orders, drawings, specifications, sketches, manuals, and oral instructions.
- Observes safe work methods and safety precautions related to the work; utilizes appropriate safety equipment including SCBA and respirators in working around hazardous chemicals, gases, and raw sewage.
- Makes routine estimates of labor and materials necessary for performance of the work; keeps records and makes reports of work performed.
- Makes sketches of work to be performed or of work completed.
- Works underground in confined spaces such as sewers, channels, or other structures to remove obstructions or make repairs.
- Performs routine carpentry and painting work on plant equipment and facilities.

Senior level

- ~~Plans, organizes, assigns, and directs the work of crew members.~~ ~~Plans, organizes, assigns, and directs the work of crew members;~~ ~~1. L~~eads and directs crews engaged in the installation, repair, maintenance and modification of a wide variety of mechanical equipment including, but not limited to, lubrication systems, drive components, bearings, pumps and compressors, piping systems, hydraulic and pneumatic systems, boilers, heating systems, fuel systems, power generation systems, and chemical application and mixing systems.
- Performs the most skilled duties; provides technical assistance to crewmembers; instructs crew in work procedure and safe work practices; troubleshoots equipment problems.
- Estimates and secures tools, material, and equipment required for assigned jobs; discusses work to be performed with supervisors; assigns tasks to individuals at the work site.
- Monitors work in progress at the work site; directs corrections and modifications as appropriate; ~~evaluates~~ ~~provides input to supervisor for~~ job performance ~~evaluations~~.
- Maintains written and computerized records of work performed and materials used; records as-built drawings of modifications; prepares a variety of written records and reports related to the work.
- Reads and interprets plans, schematics, blueprints, manuals, and specifications; designs modification as necessary.
- Directs the use and maintenance of a wide variety of hand, power and shop tools, test equipment, and other equipment related to the work; operates trucks and equipment.

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- Observes safe work methods and ensures the use of safety equipment and precautions related to the work being performed; conducts tailgate safety meetings; assists in developing training programs.
- Coordinates work assignments with other divisions; responds to questions and requests as appropriate.
- Inspects contract work to ensure compliance with specifications; recommends corrective action as necessary.
- May perform complex overhauls of engines, pumps, and motors.

MINIMUM QUALIFICATIONS

Education:

All levels

Possession of a high school diploma or GED.

Experience:

Entry Level

~~Either (a) One (1) year of experience in the maintenance of wastewater or water a treatment plant, distribution, and production facilities or general mechanical maintenance work; or (b) two (2) years of experience in operating, and maintaining and repairing internal combustion diesel, gasoline and/or natural gas engines and generators.- California Water Environment Association (CWEA) certification as a Grade I Plant Maintenance Mechanical Technologist is desirable.~~

Journey level

~~Either (a) Two (2) years of experience in mechanical maintenance work at a water or wastewater treatment facility-plant; or (b) four (4) years of experience in operating, maintaining and repairing diesel, gasoline and natural gas internal combustion engines and generators.- California Water Environment Association (CWEA) certification as a Grade II Plant Maintenance Mechanical Technologist is desirable.~~

Senior level

~~Either (a) Three (3) years of journey level experience in mechanical maintenance work at a water or wastewater treatment plant at a level equivalent to the City's class of Plant Maintenance Mechanic or six (6) years of journey level experience in operating, maintaining and repairing diesel, gasoline and/or natural gas internal combustion engines and generators.- California Water Environment Association (CWEA) certification as a Grade III Plant Maintenance Mechanical Technologist is desirable.~~

Other Requirements:

All levels

Licenses and Certifications:

- Must possess a valid California Class C driver's license.
- Possession and maintenance of a California Class A driver's license and adherence to DOT regulations within one (1) year from date of hire is desirable.

~~California Water Environment Association certification as a Grade I Plant Maintenance Technologist is desirable.~~

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Entry Level

California Water Environment Association (CWEA) certification as a Grade I Plant Maintenance Mechanical Technologist is desirable.

Journey Level

California Water Environment Association (CWEA) certification as a Grade II Plant Maintenance Mechanical Technologist is desirable.

Senior Level

California Water Environment Association (CWEA) certification as a Grade III Plant Maintenance Mechanical Technologist is desirable.

Working Conditions:

- ~~Must be able to work with constitutes and odors associated with wastewater.~~
- ~~Must be willing to work with exposure to potentially hazardous substances and to work underground in confined spaces.~~
- ~~Must be able to work in an industrial area and thus subject to moving mechanical parts, electrical currents, fuel, oil, gases, dust, heat and intense noise.~~
- ~~Must be willing to work overtime and respond to emergency call backs.~~

Physical Efforts:

- ~~Must possess strength and stamina sufficient to lift and carry objects weighing up to 100 pounds.~~
- ~~Must have the ability to work above ground at heights, ability to work off of ladders, scaffolding and man ways and man baskets.~~
- ~~Must be willing to work with exposure to potentially hazardous substances and to work underground in confined spaces.~~
- ~~Must be willing to work overtime and respond to emergency call backs.~~
- ~~California Water Environment Association certification as a Grade I Plant Maintenance Technologist is desirable.~~

Training:

- ~~Successful participation in any Department professional skills training and evaluation program.~~
- ~~Ability to work above ground at heights, ability to work off of ladders, scaffolding and man ways and man baskets.~~

Knowledge of:

All levels

- Methods, practices, materials, tools, and equipment used in the installation, repair, adjustment, and maintenance of equipment common to a ~~wastewater~~ treatment plant;
- Safety regulations and practices pertaining to the work;
- Use and maintenance of a wide variety of hand, power, and shop tools, test equipment, and other equipment related to the work;
- Rigging principles and techniques;
- Preventative maintenance practices and techniques;
- Shop mathematics;
- Internal combustion engines as well as related co-generation equipment;

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- Methods and techniques of carpentry and painting trades;
- Computerized maintenance management programs;

Journey level and Senior level

- Welding, including cutting, torching, ~~brazing~~ ~~braising~~, and oxy acetylene;

Senior level

- ~~Lead level principles and practices.~~ ~~Basic supervisory principles and practices.~~ ~~Standard and accepted principals of leadership.~~ ~~on-the-job training, and work review.~~
- ~~Codes, ordinances and regulations pertaining to the work to include Environmental Protection Agency and/or regional air quality regulations; and.~~
- ~~Methods, tools, materials and equipment used in the operation, maintenance, and repair of complex mechanical equipment and engines.~~

Skill in:

All levels

- Performing a variety of routine mechanical work on pump stations, collection systems, stationary equipment and engines such as found in ~~water and wastewater~~ treatment facilities;
- Reading and interpreting plans, schematics, manuals, blueprints, and sketches;
- Preparing rough sketches and making rough estimates;
- Troubleshooting and repairing operating problems in plant and pump station equipment;
- Keeping basic records of work performed;
- Establishing and maintaining effective working relationships.

Senior level

- Estimating labor and materials for proposed work;
- Diagnosing and repairing defects in a variety of complex mechanical equipment common to ~~a wastewater or water treatment facilities~~ utility;
- ~~Instructing, directing, and providing input regarding evaluations.~~ ~~Instructing, directing, and evaluating personnel.~~ ~~Distributing work and providing work directions, reviewing work performance and conduct of staff and providing on-the-job training to staff~~ ~~led.~~
- ~~Determining the appropriate course of action in stressful and/or emergency situations.; and~~
- ~~Overseeing the work of contractors in the installation, repair, etc. of equipment.~~

Physical/Mental Abilities:

- Mobility – Occasional sitting, crouching, kneeling, reaching or crawling. Frequent walking and standing for long periods of time. Frequent bending stooping, lifting, and driving motorized vehicles.
- Lifting/Carrying – Occasional lifting and carrying up to 100 pounds;
- Vision - Constant use of overall vision; frequent reading and close-up work, color and depth vision; ability to read and see PC screens; ability to read and produce printed material and information displayed on a visual display terminal;
- Dexterity - Constant repetitive motion; writing; grasping, holding, and reaching;
- Hearing/Talking – Ability to detect specific noises, proper equipment, operation; ability to understand

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- what people are saying in normal conversation, over the telephone and frequently over noises;
- Mental/Emotional - Occasional decision-making; frequent concentration; frequent co-worker contact; occasional working alone; ability to work with the public, exercise sound judgment and handle stressful situations;
 - Environmental/Working Conditions – Occasional to frequent exposure to noise and outdoor conditions; occasional to moderate risk of exposure to hazardous materials i.e. dirt, dust, gas, smoke, fumes, poor ventilation; exposure to extremes in temperature, humidity or wetness; working in heights; work with bio-hazards such as bio-hazards such as blood borne pathogens, sewage, waste, etc.; and working around equipment and machinery;
 - Special Requirements – Must be willing to work weekend, overtime as required and off-hours in emergency situations.

APPROVED:

DEANNA L. SOLINA, ESQ
~~INTERIM~~ DIRECTOR OF HUMAN RESOURCES

DATE: _____

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