



USUAL & CUSTOMARY JOB ANALYSIS/DESCRIPTION

JOB TITLE:	Plant Operator I
DEPARTMENT:	Operations
EMPLOYER:	Vallejo Sanitation and Flood Control District 450 Ryder Street, Vallejo, California 94590
DATE PREPARED:	1/15/2004
WORK SCHEDULE/HOURS:	8 hours per day, 5 days per week
EMPLOYEE:	
D/I:	
CLAIM NUMBER:	

Employer's Business: The employer, Vallejo Sanitation and Flood Control District, is a government agency responsible for the collection and treatment of wastewater from the sanitary sewer system and the protection from storm water.

Job Duties

Duties include operating, monitoring and maintaining treatment and collection equipment at the plant, under general supervision of a shift supervisor. The employee may carry out routine duties without immediate supervision. All duties are considered essential functions. There are no marginal job functions for this position.

- The employee ascends/descends single or multiple stair flights to access equipment, multiple floors and as needed, accessing building rooftops.
- The employee inspects plant equipment, includes reading and recording gauges for a variety of equipment including pumps, chemical feed, and other related equipment. The employee utilizes a writing utensil and clipboard to complete a checklist. The employee makes 2 plant rounds, each round is completed in approximately 1 hour.
- The employee investigates/inspects and as needed, notifies the supervisor of abnormal equipment gauge readings or situations.
- The employee, as needed, operates an electric powered cart equipped with an automatic transmission to travel to and from plant sites, includes ascending one step, maneuvering a steering wheel, pressing 2 foot pedals in conjunction with using a cushioned seat.
- The employee cleans equipment including tanks, equipment, pipes, hardscapes etc., includes turning a water valve and maneuvering a 3/4" diameter/50' hose to expel water. The employee cleans a variety of equipment including tanks, belt filter presses, stairway railings, hardscapes. Time spent cleaning hardscapes varies depending on the season (bird droppings increase during the winter). The employee utilizes a squeegee and push broom to scrub and remove excess water. Alternatively, the employee may utilize a fire hose.
- The employee, as needed, utilizes a pressure washer positioned on wheels. The employee utilizes a trigger-operated nozzle with a hose attachment to clean hardscapes. The hose is utilized in a sweeping motion.
- The employee retrieves wastewater samples. This includes utilizing a container to retrieve liquid samples from spouts or with a scoop from tanks. Alternatively, the employee retrieves dry samples. The samples are transported and left at the plant laboratory or placed in a refrigerator.
- The employee utilizes a variety of tools including wrenches, ratchets, power drills, screwdrivers, etc. to perform preventive maintenance of a variety of equipment including blowers, generation systems, chemical valves, digesters, filters, dewatering

equipment, etc. Includes removing/replacing bolts, faceplates, parts, motors, utilizing metal hooks to remove rags or debris from equipment.

- The employee “exercises”/ turns circular valve handles, includes turning valve or chains to open/close, or loosen valves. The employee may or may not use a wrench, depending on the valve’s condition.
- The employee utilizes a writing utensil to maintain accurate gauge readings and chemical test results.
- The employee, as needed, performs confined space entries, predominantly performed to inspect empty tanks, includes working with a crew of 2-3 employees. Includes setting a tripod over an opening, wearing safety equipment, and utilizing specialized testing equipment including gas detectors, lowering tools, parts and equipment to inspect, service or repair equipment.
- The employee, as needed, relocates a 4-wheeled 1-yard sized dumpster loaded with dry waste. The dumpsters are relocated and positioned underneath or away from processing equipment.
- The employee, approximately 0 to 1 time per week, removes weeds from an odor filter dirt bed.
- The employee opens/closes or removes covers or chicanes to inspect conveyors or equipment. The employee, as needed, utilizes brushes and a water hose to clean and wash conveyors/equipment. In addition, the employee may remove and replace aluminum gratings or sump pump lids to inspect and as needed, wash equipment.
- The employee, as needed, cleans building windows, includes rinsing with a water hose and utilizing a squeegee to remove excess water from hardscapes.
- The employee, as needed, opens a plant refrigerator, removes a 3 gallon liquid container, shakes the container to mix, and pours into 3 one-gallon containers. The containers are positioned in a carrier and transported to the laboratory.
- The employee works at a desk station, utilizes a computer keyboard, mouse and views a monitor to enter or retrieve data and to remotely monitor plant equipment.
- The employee loads/unloads sump pumps on and off an electric cart bed and utilizes a dolly to transport to the desired area.
- The employee, as needed, utilizes a round or square point shovel to retrieve/remove debris from hardscapes, tanks or equipment.
- The employee, as needed, utilizes a manual pallet jack to relocate polymer sacks located in the lime system room. The employee, depending on the assignment, utilizes a control box to operate an electric crane to load lime sacks.
- The employee, as needed, may operate a tractor trailer to transport sludge (night shift only), includes ascending 3 steps to access the cab, maneuvering a steering wheel, 2 foot pedals in conjunction with using a cushioned seat.

Minimum Qualifications

EDUCATION & EXPERIENCE	<ul style="list-style-type: none"> • Graduation from high school or equivalent. • One year of experience in the operation and maintenance of wastewater treatment plant; six (6) educational points and sufficient knowledge to be able to secure a Grade 1 Certificate.
-----------------------------------	--

KNOWLEDGE, SKILLS & ABILITIES	<ul style="list-style-type: none"> • Knowledge required of Operator-Entry-Level plus general knowledge of the basic principles, practices, and procedures of wastewater treatment plant operations; operation, care, and routine maintenance of equipment; safety rules and regulations; safe chemical handling and control; limitations of machinery and equipment. • Ability of the Operator-Entry-Level plus work without immediate supervision; operate and perform minor maintenance to treatment plant equipment and facilities; read and interpret a variety of meters, gauges and recording charts; recognize unusual, inefficient or dangerous operating conditions; learn the operation of sophisticated equipment; learn to interpret standardized process control tests and adjust plant equipment accordingly. • Must be able to walk on uneven surfaces; Must be able to wear a respirator in the event of a confined space rescue; must be able to work in inclement weather; Must be able to communicate with irate or difficult people; Must be able to accept constructive criticism from supervisors, co-workers, and subordinate employees.
--	--

LICENSE(S)	<ul style="list-style-type: none"> • Possession of the Grade I Wastewater Plant Operator’s Certificate of Competence issued by the California State Water Resources Control Board. • Must possess a valid Class C California Driver’s License at the time of employment. The ability to drive District vehicles is a specific requirement for this position. For that reason, it is at the employee’s responsibility to maintain a driving record that is acceptable to the District’s insurance carrier or be subject to dismissal.
-------------------	--

WEIGHED ITEMS	<ul style="list-style-type: none"> • Aluminum grating – up to 30 pounds • 3 sample containers positioned in a carrier – 25 pounds • Sump lid – 24 pounds • Sludge conveyor cover – 30 pounds • 8’ fiberglass ladder – 32 pounds • Pressure washer – 100+ pounds, lifted with the assistance of a coworker (estimated)
MEASURED ITEMS	<ul style="list-style-type: none"> • n/a
EXERTIONAL FORCE	<ul style="list-style-type: none"> • Chicane lever – up to 30 pounds

Physical Demands

For the purpose of determining frequency of activity, this job analyst refers to an eight-hour workday.

STANDING	Frequency: Duration: Surfaces: Associated Tasks:	½ hour to 1 ½ hours. Seconds to less than 5 minutes at a time. Concrete, asphalt, dirt, metal grading, all possible. Utilizing a pressure washer or hose to clean equipment and hardscapes, retrieving wastewater samples, turning valves, operating equipment, reading gauges, monitoring equipment.
WALKING	Frequency: Duration: Surfaces: Associated Tasks:	3 ½ to 4 ½ hours. Seconds to 15 minutes at a time. Concrete, asphalt, dirt, metal grading, all possible. Pressure washing, transporting tools, equipment, parts, wastewater samples, utilizing a pallet jack, cart, dolly, accessing and reading gauges, general cleaning.
SITTING	Frequency: Duration: Surfaces: Associated Tasks:	1 to 1 ½ hours. Less than ½ hour at a time. Cushioned vehicle or office chair. Working at a desk station, operating an electric golf cart to travel to and from plant sites, as needed operating a tractor-trailer.
KNEELING/ CROUCHING/ SQUATTING	Frequency: Duration: Surfaces: Associated Tasks:	Less than ½ hour to 1 hour. Seconds to less than 5 minutes at a time. Concrete, asphalt, dirt, metal grading, all possible. Retrieving samples, deragging equipment, pouring sample containers, retrieving debris, maintaining equipment.
CRAWLING	Frequency: Duration: Surfaces: Associated Tasks:	Not a job requirement.
LAYING ON BACK/STOMACH	Frequency: Duration: Surfaces: Associated Tasks:	Not a job requirement.
CLIMBING/ BALANCING	Frequency: Duration: Surfaces: Associated Tasks:	½ hour to 1 hour. Seconds to less than 2 minutes at a time. Ladder, stair steps. Ascending/descending ladders to access equipment, stairs to access multiple floors/plant rooms/equipment, ascending or descending one step to drive the golf cart, as needed a tractor-trailer, 3 steps.
BENDING • Waist:	Frequency: Duration: Associated Tasks:	30 minutes to 2 hours. Seconds to less than 5 minutes at a time. Utilizing a hose while cleaning, exercising valves, deragging equipment, retrieving wastewater samples, general cleaning, removing weeds from a dirt bed. The motion is in a forward direction between 5 and 65-degrees.
• Head/Neck:	Frequency: Duration: Associated Tasks:	3 to 4 hours. Seconds at a time. Aiding visually, normal body mechanics, maintaining equipment, general cleaning, pressure washing equipment, retrieving wastewater samples, utilizing a writing utensil to complete notes, reading gauges.

<ul style="list-style-type: none"> • Wrists: 	<p>Dominant Hand: Frequency Dominant: Non-Dominant: Bilateral: Duration: Associated Tasks:</p>	<p>2 to 4 hours. Less than 1 hour. Less than ½ hour. 2 to 3 hours. Seconds to less than 15 minutes at a time. Driving in conjunction with maneuvering a steering wheel, utilizing a shovel, general cleaning, utilizing a pressure washer, water hose, as needed utilizing basic or power tools.</p>
--	---	---

TWISTING/ROTATING		
<ul style="list-style-type: none"> • Waist: 	<p>Frequency: Duration: Associated Tasks:</p>	<p>Less than ½ hour. Seconds at a time. Cleaning or inspecting equipment, utilizing a pressure washer, shoveling debris. The motion is center to the left back to center or center to the right back to center less than 20-degrees.</p>
<ul style="list-style-type: none"> • Head/Neck: 	<p>Frequency: Duration: Associated Tasks:</p>	<p>1 to 3 hours. Seconds at a time. Aiding visually, driving, during normal body mechanics. The motion is center to the left back to center or center to the right back to center less than 45-degrees.</p>
<ul style="list-style-type: none"> • Wrists: 	<p>Dominant Hand: Frequency Dominant: Non-Dominant: Bilateral: Duration: Associated Tasks:</p>	<p>Less than 1 hour. Less than ½ hour. Less than 15 minutes. Less than ½ hour. Seconds to less than 5 minutes at a time. Utilizing screwdrivers, shovel, basic tools including screwdrivers, pliers, pouring wastewater samples from containers.</p>

UPPER EXTREMITY USE:		Dominant Hand: [indicate LEFT or RIGHT]
REACHING		
<ul style="list-style-type: none"> • Primary Reach Zone: (elbows bent at waist level, hands in forward extension) 	Frequency Dominant: Non-Dominant: Bilateral: Duration: Associated Tasks:	Up to 1 hour. Less than ½ hour. 0 Less than ½ hour. Seconds at a time. Utilizing a computer keyboard, pointing device to enter or retrieve data.
<ul style="list-style-type: none"> • Above Shoulder Level 	Frequency Dominant: Non-Dominant: Bilateral: Duration: Associated Tasks:	Up to 15 minutes. 0 0 Up to 15 minutes. Seconds at a time. Turning circular valves, chains, exercising valves.
<ul style="list-style-type: none"> • Between Waist and Shoulder Level 	Frequency Dominant: Non-Dominant: Bilateral: Duration: Associated Tasks:	5 to 6 hours. Less than 1 hour. Less than ½ hour. 4 ½ to 5 hours. Seconds to less than 15 minutes at a time. Driving in conjunction with maneuvering a steering wheel, exercising/turning valves, utilizing a pressure washer to clean hardscapes, retrieving and transporting wastewater samples, utilizing wrenches, ratchets, drills, screwdrivers, maintaining equipment, transporting a dumpster, cleaning windows, shoveling, utilizing a pallet jack to transport materials.
<ul style="list-style-type: none"> • Below Waist Level 	Frequency Dominant: Non-Dominant: Bilateral: Duration: Associated Tasks:	Less than ½ hour to 1 hour. Less than 15 minutes. Less than 15 minutes. Less than ½ hour to 1 hour. Seconds to less than 5 minutes at a time. Retrieving samples, deragging equipment, pouring tanks, retrieving debris, maintaining equipment.
PUSHING/ PULLING	Frequency Dominant: Non-Dominant: Bilateral: Duration: Associated Tasks:	Less than ½ hour to 2 hours. Less than ½ hour. Less than 15 minutes. Less than ½ hour to 2 hours. Seconds to less than 15 minutes at a time. Transporting hoses, utilizing a squeegee to clean, shoveling debris, utilizing scrapers and brushes to clean equipment, opening or closing lids, opening or closing doors, exercising/turning valves, utilizing a manual pallet jack to transport materials, relocating 4-wheeled dumpsters.

LIFTING/CARRYING		
<ul style="list-style-type: none"> • 0 to 10 lbs. 	<p>Objects:</p> <p>Frequency</p> <p> Dominant:</p> <p> Non-Dominant:</p> <p> Bilateral:</p> <p>Distance:</p> <p>Height:</p> <p>Associated Tasks:</p>	<p>Paperwork, writing utensil, drills, wrenches, ratchets, screwdrivers, samples, miscellaneous parts, components, pressure washer hose, clipboard, shovel, broom and squeegee.</p> <p>5 to 6 hours.</p> <p>1 hour.</p> <p>Less than ½ hour.</p> <p>4 ½ to 5 ½ hours.</p> <p>Less than 100 feet.</p> <p>Ground to shoulder or above.</p> <p>Utilizing a writing utensil and clipboard to complete readings, utilizing a variety of tools including drills, wrenches, ratchets, screwdrivers, samples, miscellaneous parts, pressure washer hose while cleaning, utilizing a shovel, broom or squeegee while cleaning.</p>
<ul style="list-style-type: none"> • 11 to 25 lbs. 	<p>Objects:</p> <p>Frequency</p> <p> Dominant:</p> <p> Non-Dominant:</p> <p> Bilateral:</p> <p>Distance:</p> <p>Height:</p> <p>Associated Tasks:</p>	<p>Hoses, lids.</p> <p>2 to 4 times.</p> <p>0</p> <p>0</p> <p>2 to 4 times.</p> <p>0 to less than 50 feet.</p> <p>Ground to chest level.</p> <p>Relocating hoses, opening or closing equipment lids.</p>
<ul style="list-style-type: none"> • 26 to 50 lbs. 	<p>Objects:</p> <p>Frequency</p> <p> Dominant:</p> <p> Non-Dominant:</p> <p> Bilateral:</p> <p>Distance:</p> <p>Height:</p> <p>Associated Tasks:</p>	<p>3-gallon wastewater sample containers, 8' fiberglass ladder, carrier with 3 1-gallon containers, aluminum gratings, chicanes.</p> <p>2 to 4 times.</p> <p>0</p> <p>0</p> <p>2 to 4 times.</p> <p>Less than 100 feet.</p> <p>Ground to waist level.</p> <p>Relocating sample containers, ladder, opening or closing aluminum gratings.</p>
<ul style="list-style-type: none"> • 51 to 75 lbs. 	<p>Objects:</p> <p>Frequency</p> <p> Dominant:</p> <p> Non-Dominant:</p> <p> Bilateral:</p> <p>Distance:</p> <p>Height:</p> <p>Associated Tasks:</p>	<p>Not a job requirement.</p>
<ul style="list-style-type: none"> • 75 to 100 lbs. 	<p>Objects:</p> <p>Frequency</p> <p> Dominant:</p> <p> Non-Dominant:</p> <p> Bilateral:</p> <p>Distance:</p> <p>Height:</p> <p>Associated Tasks:</p>	<p>Not a job requirement.</p>

<ul style="list-style-type: none"> • 100+ lbs. 	<p>Objects: Frequency Dominant: Non-Dominant: Bilateral: Distance: Height: Associated Tasks:</p>	<p>Pressure washer with assistance. 1 time per week. 0 0 1 time per week. 0 to less than 2 feet. Ground to waist level. With the assistance of a coworker, loads and unloads a pressure washer.</p>
--	--	---

HAND DEMANDS		
<ul style="list-style-type: none"> • Simple Grasping 	<p>Frequency: Dominant: Non-Dominant: Bilateral: Duration: Associated Tasks:</p>	<p>5 to 6 hours. Less than 1 hour. Less than ½ hour. 4 ½ to 5 ½ hours. Seconds to less than 15 minutes at a time. Driving in conjunction with maneuvering a steering wheel, relocating hand tools, clipboard, pressure washing, utilizing water hoses, transporting samples, sweeping, utilizing brushes or squeegee and general cleaning.</p>
<ul style="list-style-type: none"> • Power Grasping 	<p>Frequency: Dominant: Non-Dominant: Bilateral: Duration: Associated Tasks:</p>	<p>Less than ½ hour to 2 hours. Less than ½ hour. Less than 15 minutes. Less than ½ hour to 2 hours. Seconds to less than 5 minutes at a time. Transporting hoses, utilizing a squeegee to clean, shoveling debris, utilizing scrapers and brushes to clean equipment, opening or closing lids, opening or closing doors, exercising/turning valves, utilizing a manual pallet jack to transport materials, relocating dumpsters, loading and unloading equipment.</p>
<ul style="list-style-type: none"> • Fine Manipulation 	<p>Frequency: Dominant: Non-Dominant: Bilateral: Duration: Associated Tasks:</p>	<p>Less than 1 to 2 hours. Less than 1 hour. Less than 15 minutes. Up to 1 hour. Seconds to less than 5 minutes at a time. Utilizing a computer keyboard, mouse, writing utensil, handling small parts, bolts, nuts, screws.</p>

SPECIAL ENVIRONMENT	<ul style="list-style-type: none"> • Outdoors, exposed to all weather conditions • Working at unprotected heights • Possible exposure to fumes, dust, odors and noise • Indoors • Confined space entries
----------------------------	---

MACHINES/TOOLS	<ul style="list-style-type: none"> • Writing utensil • Wrenches • Specialty tools • Dolly 	<ul style="list-style-type: none"> • Clipboard • Ratchets • Metal hooks • Pallet jack 	<ul style="list-style-type: none"> • Electric cart • Power drills • Squeegee • Round or square point shovel 	<ul style="list-style-type: none"> • Pressure washer • Screwdrivers • Push broom • Tractor-trailer, as needed
-----------------------	---	---	---	---

ADDITIONAL REQUIREMENTS: Depending on the exposure, the employee is required to wear foot, hand, respiratory, eye, face, hearing, head, and fall protection equipment. For confined space entries the employee is required to wear a self-contained breathing apparatus and fall protection equipment.

Note: The following are not physical requirements of this job: crawling, laying on back/stomach.

EMPLOYER COMMENTS:	
This Job Analysis accurately represents the duties of a Plant Operator I to the best of my knowledge.	
EMPLOYER CONTACT NAME:	
EMPLOYER SIGNATURE:	DATE:

EMPLOYEE COMMENTS:	
This Job Analysis accurately represents the duties of a Plant Operator I to the best of my knowledge. I understand that I cannot add hours to the physical demands breakdown if the total would then be greater than the number of hours in an average workday.	
EMPLOYEE NAME:	
EMPLOYEE SIGNATURE:	DATE: