



**Disability Services  
Safety and Claims Management**  
Department of Executive Services  
Human Resources Management Division  
P.O. Box 80283  
Seattle, WA 98108  
(206) 205-8575  
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Employee :

Claim # :

## JOB ANALYSIS

Job Title:	Process Laboratory Specialist I		
Department:	DNRP	Division:	WTD
DOT Title:	Laboratory Tester	DOT #:	029.261-010
SVP:	6	Requestor:	
Worksite Address:	1400 Discovery Park Blvd M.S WTP-NR-0100 Seattle, WA 98199	Office Contact Name/ Phone/ Email:	Phuong Truong (206) 477-9786 Phuong.truong@kingcounty.gov
Original Analyst:	Kyle Pletz, VRC, CDMS		Analysis Date: 01/05/2006
Update Analyst:	Kyle Pletz, VRC, CDMS		Update Date: 10/3/17

☒ On-Site    ☐ Interview    ☐ Representative

### JOB DUTIES:

Performing routine chemical and biochemical analyses in a wastewater laboratory using required instrumentation and wet chemistry methods, conducting water quality sampling in the treatment plant and learning the basics of plant processes.

### ESSENTIAL FUNCTIONS ACCORDING TO THE EMPLOYER:

All King County jobs require ability/essential function to:

- Demonstrate predictable, reliable, and timely attendance.
- Follow written and verbal directions to complete assigned tasks on schedule.
- Read, write, and communicate in English & understand basic math.
- Learn from directions, observations, and mistakes and apply procedures using good judgment.
- Work independently or as part of a team and interact appropriately with others.
- Scientific reasoning; logical inference.

Job Specific Requirements:

- Prepare samples for analysis. Prepare necessary reagents. Perform a variety of tests on samples, including physical, chemical and biochemical analyses.
- Collect samples of wastewater, maintain the physical and quantitative integrity of each sample and maintain required documentation on samples.
- Recognize and notify higher level personnel of unusual results and keep required technical records.
- Perform routine servicing of laboratory and field equipment and maintain field equipment in a clean and orderly condition.
- Calculate, enter and track data using computer programs.
- Be aware of and observe safety procedures, following chemical hygiene plan especially when handling toxic chemicals and sewage samples.
- Identify personal career-related goals, and with assistance, develop training plan; document professional growth and personal training.



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### EXPERIENCE, QUALIFICATIONS, KNOWLEDGE, SKILLS:

#### MINIMUM QUALIFICATIONS:

- Knowledge of field and laboratory techniques and use of test equipment and instruments.
- Working knowledge of the application and use of test equipment and instruments
- Knowledge of scientific theories, principles and relevant mathematics
- Basic knowledge and skills in laboratory quality assurance/quality control
- Basic skill in using computer and associated software for spreadsheets, databases and word processing
- Skill in working with detailed information
- Skill in establishing and maintaining effective working relationships with a diverse group of individuals in varying occupations
- Skill in team consensus building techniques and principles and working in a team environment
- Demonstrated experience in applying oral and written communication skills to read, write, present and follow oral and written instructions
- Skill in establishing and maintaining effective working relationships with a diverse group of people.
- Must possess a current and valid Washington State Driver's License.
- Must have a two year degree in chemistry or related field, or equivalent combination of education and experience

#### DESIRABLE QUALIFICATIONS:

- 2 years of experience in an analytic or production lab
- 1 year experience working with Lab Information Management System (LIMS)
- Bachelor's degree in Chemistry

### Machines, Tools, Special Equipment, Personal Protective Equipment Used:

- Gloves, eye protection, hearing protection and lab coat.
- Computer, Lab Information Management System (LIMS), spectrophotometer, digestions reactors, turbidimeter, glassware, hot plates, stir plates, titrator, brushes, funnels, laboratory spatulas, rolling carts, various samples, various testing equipment, centrifuge, pipes, hoses, samplers, computer, telephone, electric cart, hydraulic lifting cart, fridges, forceps, spray bottle, glassware racks, fume hood, oven, timers, autoclave, furnace, wastewater and laboratory dishwasher; vacuum and compressed air ports.

## PHYSICAL REQUIREMENTS

Frequency Scale	Strength	Work Pattern	
<b>N</b> = Never	<input type="checkbox"/> Sedentary	<input checked="" type="checkbox"/> Full-time	
<b>S</b> = Seldom (1-10 %, up to 48 min)	<input type="checkbox"/> Light	<input type="checkbox"/> Part-time	
<b>O</b> = Occasional (11-33%, 49 min. – 2 hr 40 min)	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Seasonal	
<b>F</b> = Frequent (34-66%, 2 hr 41 min – 5 hr 20 min)	<input type="checkbox"/> Heavy	8	Hours Per Day
<b>C</b> = Constant (67-100%, more than 5 hr 20 min)	<input type="checkbox"/> Very Heavy	5	Days Per Week
<b>Work Pattern (continued)</b>		FLSA Exempt <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	



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- Work Hours: 8 hours per day, 5 days per week The employee is required to work on the weekend, alone, with no assistance, once every 4-6 weeks.
- Overtime: Required on a rare occasion during storms and special projects, approximately 40 hours per year (requirements may change at the employer's discretion)

Job Demand	Frequency and Weight (lbs)					Activity Description
	N	S	O	F	C	
<b>Lifting</b> floor – waist		36-50	4-20			Up to 5 min./time, 2 hrs. total while washing bottles (4-35 lbs.) lifting and carrying BOD Dilution water to test bench; lifting and transporting several sample bottles onto a cart then lift to shake sample bottle to split samples into designated containers. Slitting samples task involves carrying sample bottles to a cart, shaking sample bottles for at least 5 sec. to mix then pouring sample into smaller containers. 50# 1x day 30# 8x day 20# 11x day
<b>Lifting</b> waist–shoulder				1-10		Up to 5 min./time, 3 hrs. total with 3-7 lbs. while washing and placing glassware on a rolling cart or into the dishwasher. The employee also manipulates samples on lab counter. Lifts BOD dilution water bottle from waist to work bench at chest high.(about 2 minutes)
			11-20			Up to 5 min./time, 50 min. total with weights of 11-20 lbs. while washing and placing glassware on a rolling cart or into the dishwasher. The employee also manipulates samples.
		21-50				Up to 50 lbs. up to 30 sec./time for up to 2 min. total while lifting larger jugs, BOD dilution water bottle; lifting and carrying BOD incubated water 2x day. Carrying misc. lab equipment.
<b>Lifting</b> above shoulder		21-50	1-10			Up to 30 sec./time, 2 hrs. total with 1-10 lbs. when manipulating beakers, pouring samples, viewing samples; placing lab equipment on upper shelves.  Seldom up to 50 lbs., up to 2 min./time for up to 30 min. total while lifting BOD dilution water bottle from the carrying/transporting position to the counter and on top of the little stool for the ease of dispensing. Lft up to 10x for TSS testing.



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Job Demand	Frequency and Weight (lbs)					Activity Description
	N	S	O	F	C	
<b>Carry</b> (Distance/Surface)		40-50 30-40'		1-10 100'		Up to 5 min./time, up to 100', 2-3 hrs. total with weights of 3-7 lbs. while transporting glassware between the lab work area, dishwasher, various shelves and cabinets. Also 1-10 lbs. up and down 32-72 stairs and on wet/slick surfaces. 40-50# samples 30-40' 2x shift.
		11-20 30'				Up to 5 min./time, up to 30-40', 15 min. total with 15-20 lbs. while transporting large samples and emptying the broken glass container. Also carries materials/supplies and deliveries, 1x week. A cart is available.
		1-50 30'				Up to 1-2 min./time, 2x daily to carry BOD dilution bottle from incubator to workstation
<b>Pushing/Pulling</b> (Distance/Surface)				1-10 30'		Up to 30', 2 min./time, with 1-10 lbs. of force, 2-3 hrs. total while maneuvering a rolling cart (9 lbs.) with glassware and various other pieces of laboratory equipment. Also pushes/pulls when opening/closing, drawers, doors and sliding cooler door.

Physical Demands	Frequency					Activity Description
	N	S	O	F	C	
Sitting				X		On an office chair or stool up to 30-60 min./time, 2-3 hrs. total while performing computer duties, investigative research and paperwork.
Standing					X	On flat, linoleum, metal, wet/slick and cement surfaces for up to 30-60 min./time, 6 hrs. total while sterilizing, washing and preparing sample containers, glassware and other equipment to be used in the lab tests and sample collection. The employee also stands while analyzing samples, completing tests, taking readings and manipulating samples.
Walking				X		On flat, linoleum metal, wet/slick and cement surfaces for up to ¼ mile, 15 min./time, 2-4 hrs. total while collecting and delivering sample containers, glassware and other equipment to be used in the lab tests and sample collection. On a rare occasion the employee may need to walk in areas where they would need to step over pipes and hoses.
Perform Work on Ladders	X					
Climbing			X			Up to 2 min./time while climbing 32-72 steps, up to 8-16 flights total while retrieving samples throughout the treatment plant. The employee needs to be able to carry samples weighing approximately 7 pounds up and down the stairs.
Balancing		X				On step ladder, wet, slick or metal surfaces for up to 10 min./time, 30 min. total while obtaining samples.



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Physical Demands	Frequency					Activity Description
	N	S	O	F	C	
Stooping / Bending			X			On flat linoleum and cement surfaces for up to 5 min./time, 1-2 hours total while rinsing glassware over sinks, loading/emptying dishwasher, obtaining samples, removing/placing glassware in drawers and removing/placing items in low cabinets. *Can reduce bending/stopping by alternating with kneeling/squatting.
Twisting at Neck				X		Up to 15 min./time, 2-4 hrs. total while performing computer duties, looking at items on lab counter, obtaining readings, obtaining samples, assembling lab test equipment and completing laboratory tests.
Twisting at Waist	X					
Squatting / Kneeling			X			On flat linoleum and cement surfaces up to 5 min./time, 1-2 hrs. total while rinsing glassware over sinks, loading/emptying dishwasher, obtaining samples, removing/placing glassware in drawers and removing/placing items in low cabinets. *Can reduce by alternating with bending/stooping.
Crawling	X					
Reach waist to shoulder		X				Up to 10-15 min./time, 30 min. total while assembling and dismantling tall glassware for experiments, washing glassware, placing glassware in to dishwasher, or removing and placing various pieces of equipment in cabinets.
Reach above shoulder		X				Up to 10-15 min./time, 30 min. total while assembling and dismantling tall glassware for experiments or removing and placing various pieces of equipment in high cabinets.
Keyboarding			X			Up to 20 min/time, 50 min. total while entering data, composing email
Wrist Flexion/Extension			X			Up to 5 min/time, 2 hrs. total while manipulating glassware, pouring samples and to transferring data from instrument to the computer.
Handle/Grasp					X	Up to 30 min./time, 4-5 hrs. total while lifting, removing/placing glassware in cabinets, and scrubbing glassware; spray bottles, completing tests and obtaining samples.
Forceful Grasp		X				Up to 1 min/time, 50 min. total while opening bottle lids, pipetting, turning valves (for samples and tests), manipulating large jugs and shaking samples.
Fine Finger Manipulation					X	Up to 10 min./time, 4-5 hrs. total while holding and cleaning small glassware items with a small brush; using small items such as forceps, stirrers and pipets; completing computer duties, using the composite sampler key pad and writing; manipulating filters and solution packets.
Hand Controls				X		Up to 20 min./time, 2-3 hrs. total while driving an electric cart and turning faucet on/off while cleaning the glassware as well as when manipulating valves and laboratory instruments.
Foot Controls		X				Up to 30 minutes at a time for up to 1 hour total in a work shift while driving an electric cart to pick up samples.

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	N	S	O	F	C	
Repetitive Motion		X				Body Part: Hand Cycles/hr:
Vibratory Tasks – High	X					
Vibratory Tasks – Low	X					
Talking			X			Up to 5 min./time, 1 hrz. total while conversing with coworkers.
Hearing				X		Up to 30 min./time, 3-4 hrs. total while conversing with coworkers about work assignments and receiving direct instructions about work tasks. The employee also utilizes hearing when listening for timers, moving vehicles, warning sirens, backup sirens and various alarms.
Visual – Near Acuity					X	Up to 2.5 hours at a time for up to 7.5 hours total in a work shift while visually inspecting glassware for cleanliness, reading supply charts, completing laboratory tests, traversing throughout a wastewater treatment plant, driving and electric cart and using a computer.
Visual – Far Acuity					X	
Visual – Depth Perception					X	
Visual – Color Discrimination					X	
Visual – Accommodation					X	
Visual – Field of Vision					X	
Exposure to Weather			X			
Extreme Cold		X				
Extreme Hot			X			
Wet and / or Humidity				X		
Proximity to Moving Mechanical Parts				X		
Exposure to Explosives			X			Flammables
Atmospheric Conditions		X				Samples
Exposed Heights		X				
Exposure to Electricity	X					
Exposure to Toxic / Caustic Chemicals				X		
Exposure to Radiation		X				
Exposure to Fumes			X			
Exposure to Odors					X	
Exposure to Dusts			X			
Exposure to Mists			X			
Exposure to Gases				X		
Exposure to Vibration			X			
Exposure to Confined Spaces		X				
Noise Intensity	<input type="checkbox"/> Very Quiet <input type="checkbox"/> Quiet <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Loud <input type="checkbox"/> Very Loud					Approximately 50-130 decibels. The noise is caused by wastewater machinery.
Other: Feeling		X				Up to 2 min./time, 30 min. total in a work shift while identifying the temperature of laboratory equipment as to avoid burns.



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Other: Working with Heightened Awareness				X		Up to 1 hr./time, 4 hrs. total while working with dangerous items such as a 550 degree furnace, various chemicals, hazardous waste and autoclave. Work is performed in a laboratory setting with exposure to various chemicals and odors. The work is also performed in an industrial wastewater setting where the worker is exposed to or in close proximity to heavy operating machinery, high voltage, sewage, adverse weather conditions, uneven surfaces, cat walks/metal grating, noxious or toxic gasses and chemicals, as well as loud noises. Hearing protection, eye protection and hard hats are required in some areas.

### Analyst's Comments:

### Possible Employer Modifications:

- Alternate tasks to reduce repetitive tasks and duties.
- Scissor lift cart to reduce lifting and carrying.

### Update Comments (if applicable):

**Note:** The information for this job analysis was gathered by either on-site observation, interview and / or is representative of the labor market as indicated on page one. Additional data may have been obtained from standardized industry resources such as the DOT, GOE, COJ, OOH, WOIS and O-NET. On occasion, practicality and feasibility prevent the direct observation and/or gathering of objective, quantifiable data. For this reason, a "best estimate" may have been used.

### Analyst:

### Update (if applicable):

 Kyle Phet  
Vocational Consultant

16/3/17  
Date

\_\_\_\_\_  
Vocational Consultant

\_\_\_\_\_  
Date

### Employer Verification:

### Employee Verification: (optional)

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date



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### MEDICAL PROVIDER:

- ☐ I agree that the employee can perform the physical activities described in this job analysis and can return to work. Date employee is released to return to work if different from today's date: \_\_\_\_\_
- ☐ I agree the employee can perform the described job but only with modifications (describe in comments section). Modifications are needed on a ☐ permanent basis or ☐ temporary basis.
- ☐ The employee **temporarily** cannot perform this job based on the following physical limitations:

Anticipated release date: \_\_\_\_\_

Treatment plan: \_\_\_\_\_

- ☐ The employee is **permanently** restricted from performing the physical activities described in this job analysis based on the following physical limitations (state objective medical findings):

### Comments:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

- ☐ Attending Physician    ☐ Consulting Physician    ☐ Pain Program Physician
- ☐ IME Physican    ☐ PCE Therapist    ☐ OT / PT Therapist    ☐ PEP Physician