



USUAL & CUSTOMARY JOB ANALYSIS/DESCRIPTION

JOB TITLE:	Laboratory Aide/Environmental Services Aide
DEPARTMENT:	Environmental Services
EMPLOYER:	Vallejo Sanitation and Flood Control District 450 Ryder Street, Vallejo, California 94590
DATE PREPARED:	6/9/2004
WORK SCHEDULE/HOURS:	9/80 work schedule; 8 to 9 hours per shift, 4-5 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 Functions

Overview:

Under the general supervision of the Environmental Services Director, the Laboratory/Environmental Services Aide assists in the day to day operations of the Laboratory and/or Pollution Control Department. The Laboratory/Environmental Services Aide may assist the Pollution Control Specialists in the field by procuring samples of industrial discharges and storm water runoff.

Essential Functions:

POSITION 1: ENVIRONMENTAL SERVICES AIDE

1. The employee utilizes a computer keyboard, mouse and views a monitor to enter or retrieve lab data, reports.
2. The employee utilizes a writing utensil to complete paperwork including logs and reports.
3. The employee utilizes a metal hook to remove and replace manhole lids, approximately 2 manhole lids per month. The employee utilizes a light or mirror in conjunction with visually inspecting a manhole during an inspection. The employee inspects water flow, odors, cleanliness and estimates gallon flow per minute.
4. The employee places approximately 50 placards per year at curbside locations. This includes removing an adhesive paper from its backing and applying to the curb.
5. The employee sets wastewater samplers in and out of manholes or at ground level to retrieve samples, 12 times per year. May include setting a tripod over the manhole and utilizing a rope to lower the sampler. The employee utilizes a screwdriver to assemble/disassemble the sampler to clean. The employee fills the sample compartment with ice, includes utilizing a scoop to retrieve ice from an icemaker. Alternatively, the employee scoops and places ice in an ice chest.
6. The employee retrieves creek water samples. Includes utilizing a pole with an 8 ounce container attachment, lowers into the creek to retrieve water sample. The sample is placed in an ice chest, transported and set in the District vehicle.
7. The employee maintains a clean garage. Includes utilizing a broom and water hose to clean the floor. The employee washes four District vehicles one time per week includes utilizing a water hose to rinse the vehicle, a sponge/brush to scrub the vehicle frame and tiers and cloth to dry.

8. The employee utilizes a telephone handset to make or retrieve phone calls, as needed. This includes utilizing the handset and when making calls pressing 7 to 10 buttons to make a call. The employee communicates with established or potential customers.
9. The employee operates a District vehicle. This includes ascending one step, maneuvering a steering wheel, pressing 2 foot pedals in conjunction with using a cushioned seat.
10. The employee collects samples and data from the treatment plant, remote industrial random collection points within the sanitary sewer or storm drain systems.
11. The employee compiles and collects data in the field.

POSITION 2: LABORATORY AIDE

12. The employee maintains a variety of laboratory equipment including sampling, flow metering and other associated equipment. Includes utilizing a washcloth to wipe and clean equipment, as needed a screwdriver to assemble/disassemble the sampler while cleaning.
13. The employee works at a sink to wash and clean glassware. Includes utilizing brushes, sponges and water to wash items. Once washed, the employee places the glassware on a sink counter or glass rack. Alternatively, the employee sets and retrieves items in and out of an automated dishwasher.
14. The employee utilizes a telephone handset to make or retrieve telephone calls, as needed. This includes utilizing the handset and when making calls pressing 7 to 10 buttons to make a call. The employee communicates with established or potential customers.
15. The employee places and sets items in and out of a microwave, includes opening the microwave door, placing the item in the microwave and pressing microwave buttons to activate.
16. The employee retrieves, relocates and handles sample jugs, containers, flasks, precision instrumentation and other related items.
17. The employee utilizes a computer keyboard, mouse and views a monitor to enter or retrieve lab data.
18. The employee utilizes a writing utensil to complete paperwork including logs, reports and lab data.
19. The employee performs laboratory tests and procuring samples to assist in the control of the wastewater treatment plant. Includes measuring, utilizing laboratory tools to scoop/transfer powders, utilizing an electric scale to weigh solids.
20. The employee transfers liquids, includes pouring and measuring precise quantities in or out of flasks, containers or jugs. Alternatively, the employee utilizes a trigger-operated dispenser to transfer liquids into test tubes. The employee transfers liquids into test tubes positioned on a test tube rack. The employee fills up to 1000 test tubes every 2 to 3 weeks. The employee inserts mini-inverted culture tube inside of each test tube, places a screw cap on each test tube and places a rack of 40 test tubes in the oven for a 45-minute cycle.
21. The employee sanitizes lab tools and equipment Includes setting/retrieving items in and out of an autoclave. The employee opens/closes the autoclave door, places and retrieves tools or equipment from the autoclave racks and activates the autoclave.
22. The employee maintains a clean wet well located on the plant grounds, four times per shift. Includes inspecting the well, as needed utilizing a brush to scrub and remove debris from the equipment, opening a waster water valve and filling a 20-liter bottle, assessing the temperature and placing the bottle on a 2-wheeled dolly for transport. At the lab, the employee places the 20-liter bottle on a work bench, turns the

bottle several times to thoroughly mix the liquid contents and dispenses the liquid into four separate 1-gallon containers.

23. The employee maintains records of analysis.
24. The employee mixes liquids, includes setting items on an electric vibrating plate or alternatively utilizes a glass stir tool to mix liquids.
25. The employee collects samples and data from the treatment plant, remote industrial random collection points within the sanitary sewer or storm drain systems.
26. The employee analyzes samples and reports and reports the results to the Senior Laboratory Technician on a daily basis.
27. The employee prepares and analyzes QA/QC samples.

Marginal Functions:

The employee utilizes a copier to make copies, as needed. This entails opening the copier door in an upward/downward motion (exertion <5 lbs.), placing the paperwork on the copier and pressing a button to activate the copier. Alternatively, the employee places a stack of papers on a document holder and presses a button to activate.

The employee retrieves and sets paperwork/files, as needed, in and out of file cabinet drawers.

The employee utilizes a fax machine, as needed. This entails setting individual papers in the fax machine, pressing 7 to 10 buttons to obtain the desired telephone numbers and pressing a button to activate the fax.

Minimum Qualifications

EDUCATION & EXPERIENCE

A minimum of 3 college level chemistry or biology courses or one (1) year of employment in an environmental laboratory or an equivalent combination of both.

KNOWLEDGE, SKILLS & ABILITIES

- Must have mechanical skills.
- A working knowledge of specialized cleaning procedures.
- A good understanding of safety procedures for working with hazardous chemicals.
- Ability to generate reliable results and perform routine QA/QC procedures.
- Able to understand and follow oral and written instructions.
- Able to communicate efficiently and effectively with others and represent the District at public events.
- Ability to work with others and accept directions.
- Basic understanding of applied chemistry and math.
- Understand basic wastewater treatment processes.
- Be familiar with computer spreadsheets, databases and word processing programs.
- Must be able to walk on uneven surfaces.
- 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, coworkers and subordinate employees.

LICENSE(S)

Must possess a valid California Class C 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 the employee's responsibility to maintain a driving record that is acceptable to the District's insurance carrier or be subject to dismissal.



	ENVIRONMENTAL SERVICES AIDE	LABORATORY AIDE
WEIGHED ITEMS	Ice chest with ice – 10 to 18 pounds Empty sampler – 50 pounds - with ice and samples up to 65 pounds Light – 5.5 pounds 12’ sampling pole – 4 pounds 24” manhole lid – 150 pounds 36” manhole lid – 200 pounds Manhole frame – 150 pounds	Bottles on a rack – 15 pounds 2.5 gallon container with a liquid solution – less than 25 pounds Cooler with ice packs – 10 pounds Container of bottled water – 30 pounds
EXERTIONAL FORCE	N/A	Autoclave door handle – 25 pounds

Physical Demands

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

	ENVIRONMENTAL SERVICES AIDE	LABORATORY AIDE
STANDING		
Frequency: Duration: Surfaces: Associated Tasks:	1 to 3 hours. Seconds to less than 5 minutes at a time. Concrete, tile, dirt, gravel, grass, all possible. Utilizing a metal hook to remove or replace a manhole lid, setting placards at curb locations, retrieving or setting wastewater samplers, retrieving creek water samples, maintaining a clean garage or vehicles.	3 to 4 hours. Seconds to less than 5 minutes at a time. Concrete, tile. Working at a sink and washing glassware, utilizing the microwave, transferring liquids, maintaining a variety of laboratory equipment including the autoclave, electric vibrating plate, inspecting and maintaining a clean wet well.
WALKING		
Frequency: Duration: Surfaces: Associated Tasks:	1 to 3 hours. Seconds to less than 5 minutes at a time. Concrete, tile, dirt, gravel, grass, all possible. Within the building office, to and from field sites.	3 to 4 hours. Seconds to less than 5 minutes at a time. Concrete, tile. To and from the wet well, within the laboratory relocating tools, equipment, samples.
SITTING		
Frequency: Duration: Surfaces: Associated Tasks:	2 to 4 hours. Less than ½ hour at a time. Cushioned office chair or vehicle seat. Operating a vehicle to and from field sites, working at a desk station.	Up to 1 hour. Less than ½ hour at a time. Cushioned office chair. Utilizing a computer, writing, reading, weighing samples.

ENVIRONMENTAL SERVICES AIDE	LABORATORY AIDE
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KNEELING/CROUCHING/SQUATTING		
Frequency:	5 to 10 times.	Less than 10 times.
Duration:	Seconds at a time.	Seconds at a time.
Surfaces:	Concrete, tile, dirt, gravel, grass, all possible.	Concrete, tile.
Associated Tasks:	Retrieving or setting items on and off lower shelves including files, setting placards on curbside locations, retrieving samples including creek samples, maintaining a clean garage or vehicle.	Retrieving and setting items including samples on and off lower areas/shelves.

CRAWLING		
Frequency:	Not a job requirement.	Not a job requirement.
Duration:		
Surfaces:		
Associated Tasks:		

LAYING ON BACK/STOMACH		
Frequency:	Not a job requirement.	Not a job requirement.
Duration:		
Surfaces:		
Associated Tasks:		

CLIMBING/BALANCING		
Frequency:	0 to 10 times.	0 to 4 times.
Duration:	Seconds at a time.	Seconds at a time.
Surfaces:	Stepstool.	Stepstool.
Associated Tasks:	Utilizing a stepstool to retrieve or set items on and off higher shelves.	Ascending or descending stepstool to retrieve items from higher shelves.

	ENVIRONMENTAL SERVICES AIDE	LABORATORY AIDE
BENDING		
Waist		
Frequency:	Less than 5 to 15 minutes.	Less than 5 minutes.
Duration:	Seconds to less than 2 minutes at a time.	Seconds at a time.
Associated Tasks:	Setting placards on curbs, maintaining a clean garage or District vehicles, retrieving samples, setting the sampler. The motion is in a forward direction between 5 and 65-degrees.	Possibly while inspecting the wet well, utilizing brushes to clean the wet well, retrieving items from lower shelves. The motion is in a forward direction between 5 and 65-degrees.
Head/Neck		
Frequency:	2 to 3 hours.	3 to 4 hours.
Duration:	Seconds to less than 5 minutes at a time.	Seconds to less than 5 minutes at a time.
Associated Tasks:	Aiding visually, reading, writing, retrieving samples, inspecting field sites.	Transferring liquids/samples, reading, writing, operating laboratory equipment.
Wrists		
Dominant Hand:		
Frequency	2 to 3 hours.	2 to 3 hours.
Dominant:	Less than 1 to 2 hours.	Less than 1 to 2 hours.
Non-Dominant:	Less than 1 hour.	Less than 1 hour.
Bilateral:	1 to 2 hours.	1 to 2 hours.
Duration:	Seconds to less than 15 minutes at a time.	Handling sample containers, transferring samples, utilizing laboratory equipment.
Associated Tasks:	Driving in conjunction with maneuvering a steering wheel, utilizing a broom to sweep, a brush to clean District vehicles, retrieving samples, handling sample containers.	

ENVIRONMENTAL SERVICES AIDE	LABORATORY AIDE
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TWISTING/ROTATING		
<p>Waist Frequency: Duration: Associated Tasks:</p>	<p>Less than 5 minutes. Seconds at a time. During normal body mechanics, driving. The motion is center to the right back to center or center to the left back to center less than 10-degrees.</p>	<p>Not a job requirement.</p>
<p>Head/Neck Frequency: Duration: Associated Tasks:</p>	<p>1 to 2 hours. Seconds at a time. Aiding visually to perform described job duties, driving. The motion is center to the right back to center or center to the left back to center less than 35-degrees.</p>	<p>1 to 2 hours. Seconds at a time. Aiding visually, during normal body mechanics to perform laboratory tasks. The motion is center to the right back to center or center to the left back to center less than 35-degrees.</p>
<p>Wrists Dominant Hand: Frequency <i>Dominant:</i> <i>Non-Dominant:</i> <i>Bilateral:</i> Duration: Associated Tasks:</p>	<p>Less than ½ hour. Less than 15 minutes. Less than 5 minutes. Less than 15 minutes. Seconds at a time. Handling containers to pour samples, utilizing a brush while cleaning District vehicles, utilizing a screwdriver to assemble/disassemble the sampler.</p>	<p>1 to 2 hours. Up to 1 hour. Less than 15 minutes. Less than 1 hour. Seconds to less than 5 minutes at a time. Transferring samples to and from containers, flasks, test tubes, screwing or unscrewing sample container caps.</p>

UPPER EXTREMITY USE:	Dominant Hand: [indicate LEFT or RIGHT]
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ENVIRONMENTAL SERVICES AIDE		LABORATORY AIDE
REACHING		
Primary Reach Zone: (elbows bent at waist level, hands in forward extension)		
Frequency	1 to 2 hours.	Up to ½ hour.
Dominant:	Up to 1 hour.	Up to 15 minutes.
Non-Dominant:	0	Up to 15 minutes.
Bilateral:	Up to 1 hour.	Up to 15 minutes.
Duration:	Seconds to less than 15 minutes at a time.	Seconds to less than 5 minutes at a time.
Associated Tasks:	Utilizing a computer keyboard, mouse to enter or retrieve data.	Utilizing a computer keyboard, mouse to enter or retrieve data.
Above Shoulder Level		
Frequency	0 to less than 10 times.	10 to 20 times.
Dominant:	0 to less than 10 times.	10 to 20 times.
Non-Dominant:	Alternated with dominant.	Alternated with dominant.
Bilateral:	Alternated with dominant.	Alternated with dominant.
Duration:	Seconds at a time.	Seconds at a time.
Associated Tasks:	Retrieving or setting items/paperwork on and off higher shelves.	Retrieving or setting items/paperwork on and off higher shelves.
Between Waist and Shoulder Level		
Frequency	5 to 6 hours.	5 to 6 hours.
Dominant:	1 to 2 hours.	1 to 2 hours.
Non-Dominant:	Less than 1 hour.	Less than 1 hour.
Bilateral:	4 to 5 hours.	4 to 5 hours.
Duration:	Seconds to less than 15 minutes at a time.	Seconds to less than 15 minutes at a time.
Associated Tasks:	Utilizing a metal hook to remove or replace manhole lids, relocating a sampler, setting a sampler, maintaining a clean garage includes sweeping, utilizing a water hose to wash the floor, utilizing brushes or water hose to clean vehicles, operating District vehicle in conjunction with maneuvering a steering wheel	Working at a sink and washing glassware, transferring liquids, maintaining a variety of laboratory equipment including the autoclave, electric vibrating plates, inspecting and maintaining a clean wet well.
Below Waist Level		
Frequency	5 to 20 minutes.	Less than 10 times.
Dominant:	Less than 5 minutes.	Less than 10 times.
Non-Dominant:	Less than 5 minutes.	Alternated with dominant.
Bilateral:	Less than 5 to 15 minutes.	Alternated with dominant.
Duration:	Seconds to less than 2 minutes at a time.	Seconds at a time.
Associated Tasks:	Retrieving or setting items on and off lower shelves including files, setting placards on curbside locations, retrieving samples including creek samples, maintaining a clean garage or vehicles.	Retrieving or setting items on and off lower shelves, possibly samples.

ENVIRONMENTAL SERVICES AIDE	LABORATORY AIDE
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PUSHING/PULLING

Frequency <i>Dominant:</i> <i>Non-Dominant:</i> <i>Bilateral:</i> Duration: Associated Tasks:	Less than 5 minutes to ½ hour. Less than 5 to 15 minutes. Less than 5 minutes. Less than 5 minutes to ½ hour. Seconds to less than 5 minutes at a time. Relocating water hose while cleaning the garage or District vehicles, utilizing a brush to clean District vehicles, sweeping the garage floor, lowering or removing a sampler from the manhole, includes pulling a rope.	Up to 5 minutes. 0 0 Up to 5 minutes. Seconds at a time. Opening or closing dishwasher door, relocating a 2-wheeled dolly to transfer samples, opening or closing the autoclave door, microwave door.
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LIFTING/CARRYING

<u>0 to 10 lbs.</u> Objects: Frequency <i>Dominant:</i> <i>Non-Dominant:</i> <i>Bilateral:</i> Distance: Height: Associated Tasks:	Writing utensil, telephone handset, office supplies, files, paperwork, metal hook, placards, sample containers, pole with an 8 ounce container attachment, ice chest, brushes, sponges, broom. 4 to 5 hours. Less than 1 to 2 hours. Less than 1 hour. 3 to 4 hours. 0 to less than 100 feet. Ground to shoulder or above. Utilizing a writing utensil to complete paperwork, utilizing a telephone handset, handling office supplies, retrieving samples, utilizing tools to clean vehicles.	Variety of laboratory tools, sample containers, test tubes, tools, powder samples, brushes, paperwork, writing utensil, glassware, washcloths. 5 to 6 hours. 1 to 2 hours. Less than 1 hour. 4 to 5 hours. 0 to less than 100 feet. Ground to shoulder or above. Handling and utilizing a variety of laboratory tools, sample containers, test tubes, tools, handles laboratory supplies, utilizing a writing utensil to complete paperwork.
<u>11 to 25 lbs.</u> Objects: Frequency <i>Dominant:</i> <i>Non-Dominant:</i> <i>Bilateral:</i> Distance: Height: Associated Tasks:	Ice chest with samples. 0 to 10 times. 0 0 0 to 10 times. 0 to less than 25 feet. Ground to waist level. Retrieving and relocating chest with samples.	Fish tank, sample jugs. Up to 10 times. 0 0 Up to 10 times. 0 to less than 5 feet. Ground to waist level. Retrieving and relocating a fish tank, sample jugs.
<u>26 to 50 lbs.</u> Objects: Frequency <i>Dominant:</i> <i>Non-Dominant:</i> <i>Bilateral:</i> Distance: Height: Associated Tasks:	Empty sampler. 2 times per month. 0 0 2 times per month. 0 to less than 10 feet. Ground to waist level. Retrieving and relocating an empty sampler.	Not a job requirement.

ENVIRONMENTAL SERVICES AIDE	LABORATORY AIDE	
<p><u>51 to 75 lbs.</u> Objects: Frequency <i>Dominant:</i> <i>Non-Dominant:</i> <i>Bilateral:</i> Distance: Height: Associated Tasks:</p>	<p>Sampler with liquid samples and ice. 2 times per month. 0 0 2 times per month. 0 to less than 10 feet. Ground to waist level. Retrieving, relocating and positioning a sampler with liquid samples and ice.</p>	<p>Not a job requirement.</p>
<p><u>75 to 100 lbs.</u> Objects: Frequency <i>Dominant:</i> <i>Non-Dominant:</i> <i>Bilateral:</i> Distance: Height: Associated Tasks:</p>	<p>Not a job requirement.</p>	<p>Not a job requirement.</p>
<p><u>100+ lbs.</u> Objects: Frequency <i>Dominant:</i> <i>Non-Dominant:</i> <i>Bilateral:</i> Distance: Height: Associated Tasks:</p>	<p>Manhole lid. 30 times per shift for approximately 2 months per year. 0 0 30 times per shift for approximately 2 months per year. 0 feet. Waist to waist level. Utilizes a metal hook to remove or replace manhole covers, includes partial lifting, pushing or pulling.</p>	<p>Not a job requirement.</p>

ENVIRONMENTAL SERVICES AIDE	LABORATORY AIDE
HAND DEMANDS	
<p><u>Simple Grasping</u> Frequency: <i>Dominant:</i> <i>Non-Dominant:</i> <i>Bilateral:</i> Duration: Associated Tasks:</p>	<p>4 to 5 hours. 1 to 2 hours. Less than 1 hour. 3 to 4 hours. Seconds to less than 15 minutes at a time. Driving in conjunction with maneuvering a steering wheel, utilizing a broom to sweep the floor, utilizing a water hose to rinse the garage floor, setting placards, handling sample containers.</p>
<p><u>Power Grasping</u> Frequency: <i>Dominant:</i> <i>Non-Dominant:</i> <i>Bilateral:</i> Duration: Associated Tasks:</p>	<p>4 to 5 hours. 1 to 2 hours. Less than 1 hour. 3 to 4 hours. Seconds to less than 15 minutes at a time. Handling lab tools, opening or closing autoclave, microwave, handling sample containers, utilizing a telephone handset.</p>
<p><u>Fine Manipulation</u> Frequency: <i>Dominant:</i> <i>Non-Dominant:</i> <i>Bilateral:</i> Duration: Associated Tasks:</p>	<p>0 to less than ½ hour. 0 0 0 to less than ½ hour. Seconds at a time. Removing or replacing a manhole lid, relocating or setting a sample, ice chest with samples and ice, possibly while cleaning the vehicle including utilizing a brush.</p>
<p>2 to 3 hours. 1 to 2 hours. Less than 15 minutes. 1 to 2 hours. Seconds to less than 15 minutes at a time. Utilizing a computer keyboard, mouse, writing utensil to complete notes, paperwork, pressing telephone buttons to make outgoing calls.</p>	<p>Less than 5 minutes. 0 0 Less than 5 minutes. Seconds at a time. Retrieving and relocating fish tank, sample jugs.</p>
<p>1 ½ hours. Up to 1 hour. 0 Up to ½ hour. Seconds to less than 15 minutes at a time. Utilizing a computer keyboard, mouse, writing utensil to complete notes, paperwork, pressing telephone buttons to make outgoing calls, removing or replacing test tube caps.</p>	<p>1 ½ hours. Up to 1 hour. 0 Up to ½ hour. Seconds to less than 15 minutes at a time. Utilizing a computer keyboard, mouse, writing utensil to complete notes, paperwork, pressing telephone buttons to make outgoing calls, removing or replacing test tube caps.</p>

	ENVIRONMENTAL SERVICES AIDE	LABORATORY AIDE
SPECIAL ENVIRONMENT	Indoors, vehicle cab, climate controlled Outdoors, all weather conditions	Indoors, vehicle cab, climate controlled Outdoors, all weather conditions Laboratory setting, working around chemicals, solutions
MACHINES/TOOLS	Metal hook Sampler Tripod Sample retrieving pole with 8 ounce container attachment Broom Brushes Screwdriver District vehicle Sponges Fax machine Copy machine Writing utensil Telephone	Flow metering devices Glassware Sample containers Microwave Computer keyboard Writing utensil Telephone Measuring devices Brushes Electric vibrating plates Fax machine Copy machine

Note: The following are not physical requirements of this job:

ADDITIONAL REQUIREMENTS: Depending on the exposure, the employee is required to wear foot, hand, eye, face, hearing, head, protection equipment.

EMPLOYER COMMENTS:	
This Job Analysis accurately represents the duties of a Laboratory Aide/Environmental Services Aide to the best of my knowledge.	
EMPLOYER CONTACT NAME:	
EMPLOYER SIGNATURE:	DATE:

EMPLOYEE COMMENTS:	
This Job Analysis accurately represents the duties of a Laboratory Aide/Environmental Services Aide 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: