



Job Task Analysis

Employer:	Stanislaus County
Occupation:	Hazardous Material Specialist
Classification:	Hazardous Material Specialist I, II, III
Company Contact:	Risk Management 1010 10 th Street Modesto, California 95354 (209) 525-5770
Date:	December 2007; Updated November 2014
Analysis Provided By:	Lyle Andersen, PT, CWCE Andersen Physical Therapy, Inc. 3500 Coffee Road, Suite 3 Modesto, California 95355 (209) 549-4626

INTRODUCTION:

A complete job description is available through Stanislaus County Human Resources. The environmental factors, physical and functional demands for this Job Task Analysis were documented by Andersen Physical Therapy, Inc. The methodology for documentation consisted of on-site visits, using various measuring devices such as dynamometers and scales, as well as observation and interviews with employees and managers. A detailed record was made of the physical and functional demands of the job in terms of force pounds, weight, frequency, height, distance, anthropometric measurements, stamina, and degrees of range of motion. The determination of the frequencies of functional activities is based on standards provided by the National Institute for Occupational Safety and Health (NIOSH) and the Work Practice Guide for Manual Lifting (U.S. Department of Commerce, National Technical Information Service).

The Job Task Analysis is organized as follows: General work description; safety requirements; equipment; environmental factors; and physical/functional demands.

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GENERAL WORK DESCRIPTION:

The frequency of the following activities may vary according to the physical requirements of the specific job tasks that the employee may be required to perform at random intervals.

Under the general supervision of the department manager, the Hazardous Materials Specialist I,II,III conduct investigations, inspections and site mitigations in the enforcement of hazardous materials regulations and other related duties as required.

SPECIFIC DUTIES: Available through the Human Resources Department at the County of Stanislaus.

<http://www.co.stanislaus.ca.us/HR/PDF/JobSpecifications.pdf>

Safety Requirements: All employees are required to observe company safety procedures and standards to insure individual and collective safety, in addition to avoiding unnecessary risk to oneself, co-workers, customers, and property.

Equipment:

- | | |
|----------------------------------|--|
| 1. Absorbent material | 30. Pallet jack |
| 2. Air compressor/pump | 31. Pallets |
| 3. Barricades | 32. pH paper |
| 4. Boxes | 33. Phone |
| 5. Bung wrench | 34. PID |
| 6. CGI | 35. Plastic bags |
| 7. Computer | 36. Plastic liners |
| 8. Cones | 37. Plastic tubs |
| 9. Doors/buildings/trailer | 38. Pliers |
| 10. Drum dolly | 39. Propane torch/tank |
| 11. Drum label | 40. Putty knife |
| 12. Drum liners | 41. Radiation detector |
| 13. Drums | 42. Radios |
| 14. Emergency shower and eyewash | 43. Ratchet/speed wrench |
| 15. FID | 44. Rolls of plastic |
| 16. Forklift | 45. Screw driver |
| 17. Gates | 46. Self contained breathing apparatus |
| 18. Generator | 47. Shovel |
| 19. Hammer/mallet | 48. Signs |
| 20. Hazmat kit/5-step | 49. Spatulas |
| 21. Hazmat truck | 50. Spray paint |
| 22. HHW truck | 51. Stencils/pencils |
| 23. Infrared Spectrometer | 52. Switches |
| 24. IR detector | 53. Tables |
| 25. Keyboard | 54. Tape |
| 26. Marking pens | 55. Temp/perm drum ring |
| 27. Mouse | 56. Test tube holder |
| 28. Paint bins | 57. Test tubes |
| 29. Paint stirrers | 58. Trailer landing gear |

*All employees within the **Hazardous Material Specialist I, II, III & Senior** position are required to provide physical assistance for all weight and frequency requirement needs of all job tasks in order to maintain a safe work environment.*

*Employees must be physically capable of working in any of the job tasks within the **Hazardous Material Specialist I, II, III & Senior** position.*

ENVIRONMENTAL FACTORS



The following percentages are given in terms of an eight-hour workday:

Seldom =	1% - 2%	Frequent =	34% - 66%
Occasional =	3% - 33%	Constant =	67% - 100%

ENVIRONMENTAL FACTORS		MAXIMUM FREQUENCY
1.	Unprotected heights: 2 nd story or more, dock.....	Seldom
2.	Being around moving machinery: traffic, forklift, backhoe, crane, facility inspection site.	Frequent
3.	Exposure to marked changes in temperature and humidity: outside temperatures may seasonally vary between 28-110 degrees.	Occasional
4.	Exposure to dust, fumes, smoke, gases, or other irritating substances (specify): <i>Respiratory protection is available.</i>	Occasional
5.	Driving: Vehicle	Frequent
6.	Exposure to excessive noise:..... <i>Hearing protection is available</i>	Seldom
7.	Exposure to radiant or electrical energy:.....	Seldom
8.	Exposure to solvents or chemicals:..... <i>Refer to MSDS document, Hand protection is available.</i>	Frequent
9.	Exposure to slippery or uneven walking surfaces: emergency response, facility inspection.	Occasional
10.	Working below ground:.....	Not Applicable
11.	Unusual fatigue factors: level B response.	Seldom
12.	Working with explosives:.....	Not Applicable
13.	Excessive vibration:	Not Applicable
14.	Working with hands in water or other substance:..... <i>Hand protection is available</i>	Not Required
15.	Working proximity:.....	Alone: Frequent Closely with others: Frequent
16.	Working inside:.....	Continuous
17.	Working outside:.....	Continuous

FUNCTIONAL ACTIVITIES



The frequency of the following activities may vary according to the physical requirements of the specific job tasks the employee may be required to perform at random intervals.

PHYSICAL AND FUNCTIONAL REQUIREMENTS

<u>FREQUENCY DEFINITIONS</u>	<u>SELDOM</u>	<u>OCCASIONAL</u>	<u>FREQUENT</u>	<u>CONSTANT</u>
Percent of the Day	1-2%	3-33%	34-66%	67-100%
Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Non Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Repetitive & Static Work	1-50 Reps	51-250 Reps	251-1,000 Reps	1,001-20,000 Reps

1.) **PUSH**: *Pushing activities may require use of the back in conjunction with leg and arm musculature.*

MAXIMUM REQUIREMENT

0-10 pounds:	Frequent	
11-25 pounds:	Frequent	
26-35 pounds:	Occasional	
36-50 pounds:	Occasional	
51-75 pounds:	Seldom	
76-100 pounds:	Not Required	Maximum Force: 75 Pounds

Assistive Devices: 4-Wheel Cart, Hand Truck, Drum Truck. Additionally, one or more person(s) assistance is available with forces greater than 75 pounds.

Comments: Pushing is utilized with activities such as retrieving, returning, storing and/or transporting product, equipment and supplies (e.g. 4-wheel cart, 55-gallon drum, dolly, air compressor, cased returned solid waste, broom). The employee exerts up to 50 pounds of force in a horizontal plane between waist and shoulder height of a distance up to 50 feet when performing job tasks (e.g. push up to 75 pounds when tipping 55-gallon drums for transport; collection and storage of solid waste and other substances onto cart or counter received from customers; sweep, shovel; emergency response clean-up).

2.) **PULL**: *Pulling activities may require use of the back in conjunction with leg and arm musculature.*

MAXIMUM REQUIREMENT

0-10 pounds:	Frequent	
11-25 pounds:	Frequent	
26-35 pounds:	Occasional	
36-50 pounds:	Occasional	
51-75 pounds:	Seldom	
76-100 pounds:	Not Required	Maximum Force: 75 Pounds

Assistive Devices: 4-Wheel Cart, Hand Truck, Drum Truck. Additionally, one or more person(s) assistance is available with forces greater than 75 pounds.

Comments: Pulling is utilized with activities such as retrieving, returning, storing and/or transporting product, equipment and supplies (e.g. 4-wheel carts, 55-gallon drums, dolly, air compressor, cased returned solid waste, broom). The employee exerts up to 50 pounds of force in a horizontal plane between waist and shoulder height of a distance up to 5 feet when performing job tasks (e.g. pull up to 75 pounds when tipping 55-gallon drum for transport; collection and storage of solid waste and other substances onto cart or counter received from customers; sweep; emergency response clean-up). *Pushing is the preferred method of moving carts.*

3.) **STAND-UP LIFT:** *Lifting weighted objects between floor and waist height.*

<u>MAXIMUM REQUIREMENT</u>	
0-10 pounds:	Frequent
11-25 pounds:	Frequent
26-35 pounds:	Occasional
36-50 pounds:	Occasional
51-100 pounds:	Not Required
Maximum Force: 50 Pounds	

Assistive Devices: Forklift. Additionally, one or more person(s) assistance is available with weights greater than 50 pounds.

Comments: A stand-up lift is utilized with activities such as retrieving, returning, storing and/or transporting product equipment and supplies (e.g. 1-5 gallon bucket, propane tank, cased or boxed solid waste, traffic cones, batteries, miscellaneous returned items, bagged absorbent, garbage can). The employee lifts items weighing between <1 pound and 50 pounds off the floor when performing job tasks (e.g. up to 50 pound industrial battery; 50-pound buckets; miscellaneous boxed items; 19-pound bag of absorbent; miscellaneous product transported from public storage areas within the facility; one end of a 65-pound pallet; emergency response; inspection and/or clean-up; dump container). *Safe lifting is performed by utilizing a posture of partial squatting and a straight back.*

4.) **LEVEL LIFT:** *Lifting weighted objects from between waist and chest height level for a maximum horizontal distance of up to four feet.*

<u>MAXIMUM REQUIREMENT</u>	
0-10 pounds:	Frequent
11-25 pounds:	Frequent
26-35 pounds:	Frequent
36-50 pounds:	Occasional
51-100 pounds:	Not Required
Maximum Force: 50 Pounds	

Assistive Devices: Forklift, 4-Wheel Cart, Hand Truck. Additionally, one or more person(s) assistance is available with weights greater than 50 pounds.

Comments: A level lift is utilized with activities such as retrieving, returning storing, and/or transporting, product, equipment and supplies (e.g. 1-5 gallon bucket, propane tank, cased or boxed waste, traffic cones, battery, miscellaneous returned items, bagged absorbent, garbage can). The employee lifts items weighing between <1 pound and 50 pounds when performing job tasks (e.g. unload customer delivery up to 50+ pound industrial battery; 50-pound buckets miscellaneous boxed items of solid waste; 19-pound bag of absorbent; miscellaneous product transported from public storage areas within the facility; onne end of a 65-pound pallet; miscellaneous trash; solid waste shoveling; emergency response; inspection and/or clean-up; dump container).

5.) **WEIGHT CARRY:** *Carrying weighted objects between waist and chest height beyond a distance of four feet.*

<u>MAXIMUM REQUIREMENT</u>	
0-10 pounds:	Frequent
11-25 pounds:	Frequent
26-35 pounds:	Frequent
36-50 pounds:	Occasional
51-100 pounds:	Not Required
Maximum Force: 50 Pounds	

Assistive Devices: Forklift, 4-Wheel Cart, Hand Truck. Additionally, one or more person(s) assistance is available with weights greater than 50 pounds.

Comments: Weight carry is utilized with activities such as retrieving, returning storing, and/or transporting product, equipment and supplies (e.g. 1-5 gallon bucket, propane tank, cased or boxed waste, traffic cone, batteries, miscellaneous returned items, bagged absorbent, garbage can). The employee carries items weighing between <1 pound and 50 pounds from 5 to 50 feet when performing job tasks (e.g. up to 50+ pound industrial battery; 50-pound bucket; miscellaneous boxed items of solid waste; 19-pound bag of absorbent; miscellaneous product transported from public storage areas within the facility; drag one end of a 65-pound pallet; miscellaneous trash; solid waste shoveling; emergency response; inspection and/or clean-up; dump container).

6.) **OVERHEAD LIFT/PULL DOWN:** *Lifting weighted object from/to chest and overhead height level.*

<u>MAXIMUM REQUIREMENT</u>	
0-10 pounds:	Occasional
11-25 pounds:	Occasional
26-35 pounds:	Seldom
36-100 pounds:	Not Required
Maximum Force: 30 Pounds	

Assistive Devices: A vertical ladder, step ladder or step stool is available to bring items to eye or shoulder level. Additionally, one or more person(s) assistance is available with weights greater than 30 pounds.

Comments: Overhead lift/pull down is utilized with activities such as retrieving, returning, storing, and/or transporting equipment and supplies (e.g. barricade, traffic cones, smashed cans, bottles, bagged absorbents). The employee lifts items weighing between <1 pound and 30 pounds to a maximum height of 72 inches when performing job tasks (e.g. loading/unloading 10-pound traffic cones and up to 30-pound barricades; throwing discard into dumpster, unload customer stacked delivery). *Variables to overhead reaching will be the employee's height and anthropometric reach.*

7.) **OVERHEAD REACH:**

MAXIMUM FREQUENCY:	Occasional
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Comments: Overhead reach is performed to a maximum height of 72 inches when retrieving, returning, storing, stacking, and/or transporting equipment and supplies (e.g. emergency response inspection and/or clean-up; inspect stored waste; miscellaneous stored items on shelves). *A ladder (appropriate height) or step stool may be utilized to bring items to eye or shoulder level. Variables to overhead reaching will be the employee's height and anthropometric reach.*

8.) FORWARD REACH:**MAXIMUM
FREQUENCY:** Frequent

Comments: Forward reach is performed to a distance of 32 inches when manipulating, handling, retrieving, returning, storing, transporting, operating, utilizing and/or preparing sold waste, substances, equipment and supplies (e.g. desktop work; sort chemicals; waste analysis; pack chemicals; pour fluids; drive vehicle; hazardous spill clean-up with broom; shovel, scoop; emergency response inspection and/or clean-up). *The degree of elbow extension required for reaching will vary according to the employee's anthropometric reach.*

9.) STOOP:**MAXIMUM
FREQUENCY:** Seldom

Comments: Stooping is performed when retrieving, returning, moving, transporting, utilizing, and/or preparing waste, substances, equipment and supplies (e.g. hazardous spill clean-up; dump 1 to 5-gallon container; miscellaneous lifting; collect waste and waste analysis; emergency response inspection and/or clean-up). *Variable to stooping will be the employee's height. Stooping of the head, trunk and knees can be minimized or avoided by substituting alternate positions of squatting, kneeling or bending when performing job tasks.*

10.) SQUAT: (Unloaded)**MAXIMUM
FREQUENCY:** Seldom

Comments: Squatting is performed when retrieving, returning, storing and/or observing waste, substances, equipment and supplies (e.g. analyze and/or collect sample; discard material; label container; emergency response inspection and/or clean-up). *Squatting may be minimized or avoided by substituting alternate positions of bending or kneeling. Partial squatting is a preferred lifting posture.*

11.) FORWARD BEND:**MAXIMUM
FREQUENCY:** Frequent

Comments: Bending forward at the waist is performed when retrieving, returning, storing and/or transporting waste, substance, equipment and supplies (e.g. unload customer delivery place household waste into drums and bins; store waste or chemicals at emergency response calls; lift miscellaneous hazardous waste material; emergency response inspection and/or clean-up). Maximum forward trunk flexion required is 60 degrees. *Employee may minimize or avoid excessive forward bending of the trunk up to 80 degrees by using alternate positions of bending at the hips, kneeling, half kneeling, stooping, sitting or squatting.*

12.) TWIST:**MAXIMUM
FREQUENCY:** Frequent

Comments: Twisting at the waist is performed when retrieving, returning, storing and/or transporting waste, substance, equipment and supplies (e.g. unload customer delivery; relocation of waste; pour/dump waste; emergency response inspection and/or clean-up). *Twisting at the waist may be minimized by turning the whole body, including the feet.*

13.) **TURN:**

**MAXIMUM
FREQUENCY:** Frequent

Comments: Turning is performed when retrieving, returning, storing and/or transporting waste, substance, equipment and supplies (e.g. to unload customer delivery; relocation of waste; pour and dump waste).

14.) **KNEEL:**

**MAXIMUM
FREQUENCY:** Seldom

Comments: Kneeling is performed when retrieving, returning, storing and/or observing waste, substances, equipment and supplies (e.g. waste/substance sample; label container; emergency response inspection; clean-up). *Kneeling may be minimized or avoided by substituting alternate positions of bending, squatting, or half kneeling.*

15.) **CRAWL:**

**MAXIMUM
FREQUENCY:** Not Required

Comments: Crawling is not required to perform job tasks.

16.) **STAIR CLIMB:**

**MAXIMUM
FREQUENCY:** Seldom

Comments: Stair climb is required in order to go to/from the 2nd story within buildings where elevators are not available. Maximum number of 24 steps is climbed.

17.) **LADDER CLIMB:**

**MAXIMUM
FREQUENCY:** Seldom

Comments: Ladder climbing is performed onto/off of safety ladders or steps to access solid waste, substances, equipment and/or supplies (e.g. leaking valves, container leak; roof-tops) located 12 feet above floor level (e.g. emergency response; general plant inspection). *Variables to overhead climbing will vary according to the employee's height and anthropometric reach. More than 12 foot heights are required at some industrial locations when climbing to the top of some tanks and buildings. On a very seldom basis attached vertical ladders are climbed up to 20+ feet in height.*

18.) **WALK:**

**MAXIMUM
FREQUENCY:** Frequent

Comments: Walking is performed when retrieving, returning, storing, moving, transporting and/or utilizing waste, substance, equipment and supplies (e.g. unload customer delivery; consolidate waste into drums; waste clean-up, sweep; customer service; visit inspection site; off-site clean-up; emergency response inspection and clean-up). Walking length varies between 3 feet and 100+ feet depending on job task. *Specific work tasks may require up to frequent standing and/or walking.*

19.) **SIT:**

**MAXIMUM
FREQUENCY:** Frequent

Comments: Sitting is performed for a maximum of 60-minute intervals when performing job tasks, operating and/or utilizing equipment (e.g. desktop work; analyzing reports, site mitigation; operate; drive vehicle; forklift). *Specific work tasks may require up to frequent sitting and/or walking.*

20.) **STAND: (Static)**

**MAXIMUM
FREQUENCY:** Occasional

Comments: Static standing is performed for a maximum of 30-minute intervals when retrieving, returning, storing, adjusting, operating and/or preparing waste, substance, equipment and supplies (e.g. stand for waste identification/analysis; monitoring clean-up; supervision/observation of crew; consolidating waste; logging unknown and known products worksite inspection).

21.) **BALANCE:**

**MAXIMUM
FREQUENCY:** Continuous

Comments: Good balance is required for safe walking, standing, climbing, reaching and lifting.

22.) **HAND/FOOT CONTROL:**

	<u>MAXIMUM REQUIREMENT</u>
HAND:	
Right:	Occasional
Left:	Occasional
Both:	Occasional
Either:	Occasional
FOOT:	
Right:	Occasional
Left:	Occasional
Both:	Occasional
Either:	Not Required

Comments: Hand controls are utilized to operate equipment (e.g. vehicle, air tank valve, 5th wheel trailer lever, forklift, barrel ring lever) when retrieving, returning, adjusting and/or utilizing equipment (e.g. drive vehicle to/from off-site inspection; emergency response call; trailer hitch, trailer support crank lever; operate forklift). Foot controls are utilized to operate equipment (e.g. vehicle, forklift).

23.) UPPER AND LOWER EXTREMITY COORDINATION:

<u>MAXIMUM REQUIREMENT</u>	
Simple Grasp:	Frequent
Firm Grasp:	Frequent
Fine Manipulation:	Occasional
Eye/Hand Coordination:	Frequent
Hand/Foot Coordination:	Occasional

Comments: Grasping and coordination activities are performed when preparing, utilizing, operating, dumping, sorting, storing product, supplies, equipment and machines (e.g. waste, equipment collection).

Simple grasping is utilized to perform job tasks (e.g. lift and manipulate objects weighing less than 5 pounds; empty cans/bottles, cardboard, operate forklift/vehicle, desktop work).

Firm grasping is utilized to perform job tasks (e.g. lift and handle objects weighing 5 pounds or greater; lift full buckets, cans, bottles; cased/boxed waste, open cans/bottles, pour/dump fluids; operate forklift, drive vehicle).

Fine manipulation is utilized to perform job tasks (e.g. handwrite, document unknown identification hazard categorization, keyboard, mouse, file, sort, batch).

Eye/hand coordination is utilized to perform job tasks (e.g. drive vehicle; operate forklift; pour and dump fluids, handwrite, measurements).

Hand/foot coordination is utilized to perform job tasks (e.g. drive forklift/vehicle).

Depending on individual hand dominance, one hand may be used more frequently than the other when performing job tasks.

24.) CERVICAL (NECK) MOVEMENT:

<u>MAXIMUM REQUIREMENT</u>	
Static Neutral Position:	Frequent
Flexing:	Frequent
Rotating:	Occasional
Extending:	Seldom

Comments: Neck movement is required when performing job tasks (e.g. site inspection; drive vehicle/forklift; pour substances; waste analysis; public disposal observation; stack/unstuck solid waste; off-site clean-up; inspection; consolidate and identify substance and solid waste; measurements). *Participating in observation of work environment allowing for safe working conditions. Full cervical range of motion is required to safely perform the job tasks.*

{End of Report}



Stanislaus County

JOB TASK ANALYSIS SUMMARY

<u>FREQUENCY DEFINITIONS</u>	<u>SELDOM</u>	<u>OCCASIONAL</u>	<u>FREQUENT</u>	<u>CONSTANT</u>
Percent of the Day	1-2%	3-33%	34-66%	67-100%
Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Non Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Repetitive & Static Work	1-50 Reps	51-250 Reps	251-1,000 Reps	1,001-20,000 Reps

The following is a summary of the physical demands of the Job Task Analysis that were obtained for the position of:

HAZARDOUS MATERIAL SPECIALIST I, II, III & SENIOR

Functional Activities	Maximum Requirements	Functional Activities	Maximum Requirements
<i>Push (Force)¹</i>	75 pounds	<i>Stair Climb¹</i>	Seldom
<i>Pull (Force)¹</i>	75 pounds	<i>Ladder Climb¹</i>	Seldom
<i>Stand Up Lift¹</i>	50 pounds	<i>Walk¹</i>	Frequent
<i>Level Lift¹</i>	50 pounds	<i>Sit¹</i>	Frequent
<i>Weight Carry¹</i>	50 pounds	<i>Stand (Static)¹</i>	Occasional
<i>Overhead Lift/Pull Down</i>	30 pounds	<i>Balance¹</i>	Continuous
<i>Overhead Reach¹</i>	Occasional	<i>Hand Control¹</i>	Occasional
<i>Forward Reach¹</i>	Frequent	<i>Foot Control¹</i>	Occasional
<i>Stoop¹</i>	Seldom	<i>Simple Grasp¹</i>	Frequent
<i>Squat (Unloaded)¹</i>	Seldom	<i>Firm Grasp¹</i>	Frequent
<i>Forward Bend¹</i>	Frequent	<i>Fine Manipulation¹</i>	Occasional
<i>Twist¹</i>	Frequent	<i>Eye/Hand Coordination¹</i>	Frequent
<i>Turn¹</i>	Frequent	<i>Hand/Foot Coordination¹</i>	Occasional
<i>Kneel¹</i>	Seldom	<i>Cervical (neck) Movement¹</i>	Frequent
<i>Crawl</i>	Not Required		

¹ The critical demands of the job.

Lyle Andersen, PT

 Lyle Andersen, PT, CWCE
 Preparer Signature

B. B. 11/25/14

 Contact Person
 Title *HM Manager*

 Contact Person
 Title

 Contact Person
 Title

LA/ga