

EMPLOYER - PHYSICAL DEMANDS ANALYSIS

Pulp Mill Day Labourer

Job Title:	Pulp Mill Day Labourer	http://youtu.be/p1OMaFm4IXQ (YouTube) http://albertaforestproducts.ca/our-industry/health-safety/physical-demands-analyses-pda (Website)
Work Schedule:	10-12-hour shifts Regular breaks are self-directed and spaced throughout the workday: Usually two 15-minute coffee breaks and one 30-minute lunch break per shift.	Video Link:
General Description and Job Function:	Responsible for general clean-up duties (removal of wood waste) of the following areas: <ul style="list-style-type: none"> ➤ Chip and hog belts ➤ Pits ➤ Tunnel ways ➤ Conveyors ➤ Radial arms 	
Marginal Job Functions: (may include, but not limited to)	<ul style="list-style-type: none"> ➤ Operate mobile equipment (front-end loader, rock truck, bobcat) ➤ Tank watch ➤ Fire watch ➤ Clear rail tracks/crossings of ice/wood debris ➤ Clear plug-ups 	
Equipment used to perform the job: (may include, but not limited to)	<ul style="list-style-type: none"> ➤ Shovel ➤ Broom ➤ Air wand ➤ Rake ➤ Sledgehammer ➤ Pike pole ➤ Pickeroon ➤ Pitchfork ➤ Vacuum 	
Recommended Personal Protective Equipment: (may include, but not limited to)	<ul style="list-style-type: none"> ➤ Eye protection ➤ Face shield ➤ Hearing protection ➤ Steel toed boots ➤ Dust mask ➤ Coveralls ➤ Hand protection ➤ Head protection 	
Environmental Conditions:		
Inside/Outside:	Inside 80% Outside 20%	
Working Temperature:	May involve exposure to hot or cold weather conditions	
Walking Surfaces :	Concrete, metal grating, mud, wood debris, snow, ice	
Dust:	Very high – wood dust	
Lighting:	Adequate overhead, indoor/outdoor lighting in most areas, but may have to work in areas of mill with low light levels	
Vapour/Fumes:	N/A	
Noise Levels:	>85dBA	
Vibration:	Mild –machinery, conveyors, air wand Moderate – sledgehammer	
Moving Objects:	Conveyors, mobile equipment	
Risks/Hazards: (may include, but not limited to)	<ul style="list-style-type: none"> ➤ Slipping, tripping, falling ➤ Skin punctures ➤ Pinch and nip ➤ Muscle strains and soreness ➤ Cuts and abrasions 	

	➤ Prolonged bending twisting		
Size of Work Space:	Variable - may have to maneuver into tight spots to complete clean-up duties		
Sensory Requirements:			
Hearing: Conversation or sounds	Vision: Near/Far, Colour, and Depth	Feeling: Tactile sensory discrimination	
Reading: English	Speech/Comprehension: English		
Other Work Factors:			
Travelling:	Fuel/Mail runs	Working Alone:	Required through majority of the workday
Working Independently/In Group:	Required to work independently for the majority of the shift, may be asked to assist a co-worker or request assistance when required		
Work Pace (self/machine directed):	Self – 80% (continually monitors areas of responsibility and intervenes in a timely manner) Machine – 20%		
Interaction with Others:	Required to work with co-workers in areas inside/outside mill		
Operation of Equipment: (may include, but not limited to)	Seldom: Mobile equipment (front-end loader, rock truck, bobcat)		

Assessment Criteria Used

Frequency Key		
Frequency	% of Workday	Hours of 12 Hour Workday
Not Required (N/R)	0%	0
Seldom (S)	0-5%	Not performed on a daily basis
Rare (R)	1-5%	<37 min/day
Occasional (O)	6-33%	37 min to 3 hours 58 min/day or 1 rep/30 min
Frequent (F)	34-66%	3 hours 59 min to 7 hours 55 min/day or 1 rep/2 min
Constant (C)	67-100%	7 hours 56 min to 12 hours/day or 1 rep/30 sec

Force Level (FL)	Weight Handled (WH)
Sedentary (SD)	0-10 lbs
Light (L)	Less than 20 lbs
Medium (M)	20-49 lbs
Heavy (H)	50-99 lbs
Very Heavy (VH)	100+ lbs

Critical Job Demands Weight/force (lb)	Comments <i>Examples listed are for illustrative purposes (i.e. weight generalities)</i>	MEASURE		FREQUENCY OF WORKDAY					
		FL	WH	N/R	S	R	O	F	C
Manual Handling Tasks									
Lift:									
Floor to Waist		SD	0-10	X					
	Rake, shovel, pickeroon, pike pole, pitchfork, vacuum	L	<20					X	
	Sledgehammer	M	20-49			X			
	Rollers	H	50-99		X				
Waist Level		VH	100+	X					
		SD	0-10	X					
	Moving wood debris onto conveyors, vacuuming	L	<20					X	
		M	20-49	X					
Waist to Chest	Rollers	H	50-99		X				
		VH	100+	X					
		SD	0-10	X					
	Emptying wheelbarrow, shoveling wood debris onto conveyors, vacuuming	L	<20					X	

Critical Job Demands Weight/force (lb)	Comments <i>Examples listed are for illustrative purposes (i.e. weight generalities)</i>	MEASURE		FREQUENCY OF WORKDAY						
		FL	WH	N/R	S	R	O	F	C	
Waist to Overhead		M	20-49	X						
		H	50-99	X						
		VH	100+	X						
		SD	0-10	X						
	Shoveling/vacuumping wood debris from I-beams and other equipment	L	<20		X					
		M	20-49	X						
		H	50-99	X						
Front Carry		VH	100+	X						
		SD	0-10	X						
	Rake, shovel, pickeroon, pike pole, pitchfork, vacuum	L	<20				X			
	Sledgehammer	M	20-49				X			
Side Carry	Right Hand	Rollers	H	50-99		X				
			VH	100+	X					
			SD	0-10	X					
			H	50-99	X					
	Left Hand	Rake, shovel, pickeroon, pike pole, pitchfork, vacuum	L	<20					X	
		Sledgehammer	M	20-49					X	
			H	50-99	X					
			VH	100+	X					
Pushing (tools/objects)	Static		SD	0-10	X					
		Moving wood debris	L	<20			X			
		Clearing plug-ups	M	20-49			X			
			H	50-99	X					
			VH	100+	X					
	Dynamic		SD	0-10	X					
		Moving wood debris	L	<20					X	
		Clearing plug-ups, utilizing sledgehammer	M	20-49					X	
			H	50-99	X					
			VH	100+	X					
Pulling (tools/objects)	Static		SD	0-10	X					
		Moving wood debris	L	<20			X			
		Clearing plug-ups	M	20-49			X			
			H	50-99	X					

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		FL	WH	N/R	S	R	O	F	C
Dynamic		VH	100+	X					
		SD	0-10	X					
	Moving wood debris	L	<20						X
	Clearing plug-ups, utilizing sledgehammer	M	20-49						X
		H	50-99	X					
		VH	100+	X					
Grip Strength/Coordination									
Repetitive Use of Hands									
Bilateral		SD	0-10	X					
	Moving wood debris	L	<20						X
	Clearing plug-ups	M	20-49						X
		H	50-99	X					
		VH	100+	X					
Dominant Hand		SD	0-10	X					
	Moving wood debris	L	<20				X		
	Clearing plug-ups	M	20-49				X		
		H	50-99	X					
		VH	100+	X					
Non-Dominant Hand		SD	0-10	X					
	Moving wood debris	L	<20				X		
	Clearing plug-ups	M	20-49				X		
		H	50-99	X					
		VH	100+	X					
Power Grip									
Bilateral		SD	0-10	X					
		L	<20	X					
	Moving wood debris with wheelbarrow	M	20-49				X		
	Utilizing sledgehammer, lifting rollers	H	50-99		X				
		VH	100+	X					
Dominant Hand		SD	0-10	X					
	Utilizing air wand	L	<20				X		
	Clearing plug-ups with pickeroon	M	20-49				X		
		H	50-99	X					
		VH	100+	X					
Non-Dominant Hand		SD	0-10	X					
	Utilizing air wand	L	<20			X			
	Clearing plug-ups with pickeroon	M	20-49			X			
		H	50-99	X					
		VH	100+	X					
Fine Hand Dexterity									
Bilateral	Operating mobile equipment				X				
Dominant hand	Operating mobile equipment				X				
Non-Dominant Hand	Operating mobile equipment				X				
Manual Handling									
Bilateral		SD	0-10	X					
		L	<20	X					
	Moving wood debris with wheelbarrow	M	20-49				X		
	Lifting rollers	H	50-99		X				
		VH	100+	X					

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		FL	WH	N/R	S	R	O	F	C
Dominant hand	N/R	SD	0-10	X					
		L	<20	X					
		M	20-49	X					
		H	50-99	X					
		VH	100+	X					
Non-Dominant Hand	N/R	SD	0-10	X					
		L	<20	X					
		M	20-49	X					
		H	50-99	X					
		VH	100+	X					
Tool Usage									
Both Hands		SD	0-10	X					
	Shovelling, raking, sweeping wood debris	L	<20						X
	Moving wood debris with wheelbarrow, shovel, sledgehammer	M	20-49						X
		H	50-99	X					
Dominant hand		VH	100+	X					
		SD	0-10	X					
	Utilizing air wand	L	<20				X		
	Clearing plug-ups with pickeroon	M	20-49				X		
Non-Dominant Hand		H	50-99	X					
		VH	100+	X					
		SD	0-10	X					
	Utilizing air wand	L	<20			X			
Non-Dominant Hand	Clearing plug-ups with pickeroon	M	20-49			X			
		H	50-99	X					
		VH	100+	X					

Critical Job Demands Weight/force (lb)	Comments <i>(Examples listed are for illustrative purposes)</i>	FREQUENCY OF WORKDAY					
		N/R	S	R	O	F	C
Positional Mobility							
Sitting/Standing/Driving							
Sitting	Tank/Fire Watch duties		X				
Standing	Clean-up duties					X	
Driving (Car and Truck)	N/R	X					
Walking							
Level Surfaces	Clean-up duties					X	
Rough Surfaces	Outside worksite terrain				X		
Slopes	Long, steep				X		
Climbing							
Stair	Accessing work areas				X		
Ladder	Accessing work areas				X		
Other (stools/equipment/etc.)	N/R	X					
Jumping	N/R	X					
Running	N/R	X					
Balancing	Outside worksite terrain				X		

Critical Job Demands Weight/force (lb)	Comments <i>(Examples listed are for illustrative purposes)</i>	FREQUENCY OF WORKDAY					
		N/R	S	R	O	F	C
Bending							
Static	Clean-up duties				X		
Variable	Clean-up duties						X
Trunk Rotation							
Static Twisting	Clean-up duties				X		
Variable Twisting	Clean-up duties						X
Crouching Squatting							
Crouching	Clean-up duties			X			
Repetitive Squatting	Clean-up duties				X		
Kneeling/Crawling							
Kneeling	Clean-up duties			X			
Crawling	Clean-up duties			X			
Reaching							
Above Shoulder Level	Clean-up duties				X		
Below Shoulder Level	Clean-up duties						X
Neck Postures/Movements	All neck positions required (180°, up, down, side to side)						X
Throwing	Clean-up duties					X	
Foot Action	N/R	X					
Forceful/Jerky Movements	Utilizing sledgehammer, clearing plug-ups		X				

Psychosocial Demands:	REQUIREMENTS					
	N/R	S	R	O	F	C
A. Understanding and Memory						
Remember locations and routine procedures						X
Understand and remember short and simple instructions						X
Understand and remember detailed instructions		X				
B. Sustained Concentration & Persistence						
Carry out short and simple instructions						X
Carry out detailed instructions			X			
Maintain attention and concentration for extended periods						X
Perform activities within a schedule						X
Sustain an ordinary routine without supervision						X
Make simple decisions						X
Solve simple straightforward problems						X
Solve complex problems		X				
C. Social Interaction						
Interact with the general public		X				
Ask questions or request assistance				X		
Accept instructions and feedback				X		
Get along well with others without distracting them						X
Get along well with others without being distracted by them						X

Psychosocial Demands:	REQUIREMENTS					
	N/R	S	R	O	F	C
D. Adaptation						
Respond to changes in the environment or tasks						X
Aware of normal hazards and take appropriate precautions						X
Travel in unfamiliar places or use public transportation	X					
Set realistic goals or make plans independently of others						X
Juggle tasks and prioritize					X	
E. Responsibility & Accountability	Yes			No		
Does the work involve occasional pressure to meet deadlines?	X					
Does the work involve significant pressures?				X		
F. Language Requirements	Yes			No		
Is English required for safety purposes?	X					
Is English required for professional purposes?	X					

Injury Prevention Recommendations	
1.	Stretch-regularly used muscles throughout the shift
2.	Neck, back, upper and lower extremity warm-up exercises recommended before undertaking manual handling tasks to reduce the chance of soft tissue injuries
3.	To help prevent low back strain/sprain from incorrect manual handling techniques – incorporate proper manual handling techniques at all times; utilize dolly, cart, hoist or forklift for all items over 50 lbs or of awkward shape whenever possible; maintain physical conditioning to a Medium-Heavy manual handling level
4.	To help prevent lower extremity joint/muscle pain due to general de-conditioning, poor cushioning in footwear and spending extended periods weight bearing on concrete surfaces – ensure proper fitting footwear with adequate cushioning; take regular stretch breaks hourly
5.	To prevent knee injuries, knee pads should be utilized when kneeling on hard or rough surfaces

Technical data provided by: Jason Shepherd Physical Therapy