

## VIDESIGN PROJECT

# SWEEPING ASPHALT PRODUCTION PLANT

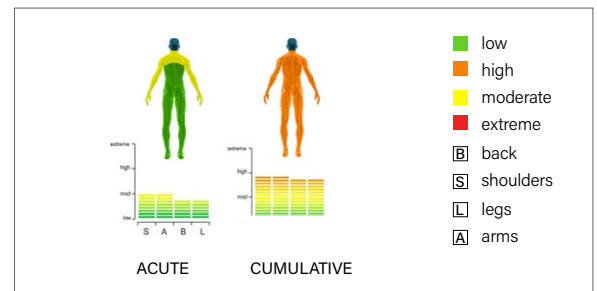
### BEFORE

- » Plant operators used long-handed standard brooms to sweep fine dust into loads shovelled into wheelbarrows and then to bins.
- » Task performed mostly at end of shift: requiring 4 ½ hrs/shift or 90min each for 3 workers. Shifts frequently extended to 13 – 14hrs late evening.
- » Repetition, duration, and fatigue were of concern, as well as neck discomfort.



### HEALTH ISSUES AND INITIAL ASSESSMENT: COURTESY OF VIVA HEALTH AT WORK ERGOANALYST

- » High risk for whole body cumulative strain



### AFTER

### CONTROL STRATEGIES: COMMERCIAL MANUAL PUSH BROOM WITH HOPPER

- » A commercially available manual push broom with circular brooms and hopper.
- » Interventions = 3 Site visits (initial, control development workshop, and equipment trial / re-evaluation).
- » Activities: observation, conversation, measures, task analysis, data collection, photo imagery, video, design philosophy development, management and procurement consultation, reporting, risk determination, cost analysis.



### COST BENEFITS AND PROJECT TIMES

- » 8 weeks from task ID to resolution
- » Reduced work time to half, total of 2hr 15min, or 45min per worker among 3 team members; save of up to 2.5 hrs per shift or annualised cost savings of \$27K.

### ANALYSIS AFTER IMPLEMENTATION

The new and relatively inexpensive, commercially-available control drastically reduced the risk of musculoskeletal injury.

	Risk Reductions	
	Acute	Cumulative
Shoulders	50%	53%
Arms	50%	53%
Back	33%	50%
Legs	33%	50%

