

Ergonomics Case Study

Moving Cleaning Stations to a New Facility

Background:

ServiceMaster of Seattle is a disaster restoration service company. In 2008, they were moving to a new facility. CEO Michael S. Mack had foresight to ask for ergonomics design input ahead of the move-- before buying new cleaning stations and sinks. He knew that planning ahead can be less costly than retrofitting or replacing bad choices. Other benefits for good design include: work can be easier, safer, and faster to do. Bad design can cause worker discomfort, slower speed, and require more effort to do the work.

What kinds of problems did we find with the old cleaning station setup?

Before:

Distance from conveyor to counter edge (per side) = 27.75 inches
Conveyor width = 18 inches



The cleaning stations were deep. This made workers reach a long way to pick items from racks while on either side of the conveyor. For short workers they also had to bend forward at the waist to reach items.

The sink and counter heights didn't pose a problem.

What did we recommend?

- Shorter counter depth to reduce reach distances
- Ensure good toe clearance under the cleaning station to minimize reach distances
- A few layout suggestions using L-shape configurations of counters and sinks instead of a straight line
- Gave guidelines for best working heights while standing
- For other operations involving frequent and heavy lifting—when possible, minimize double handling and use equipment to lift or push instead of using muscle power

What did they do?

After discussions with staff, management decided to keep the in-line setup on both sides of the conveyor. They changed to more narrow workstations with ample toe space and to wider conveyors. Workers can more easily reach items from either side of the conveyor, even from the middle of the conveyor.

After:



Follow-up

Workers are quite happy with the new design. They don't reach as far and have lower risk for injuries. As of November 2008, productivity for this work area improved by 8 percent. Management credits the improved workstation design for the improved productivity. Mack believes that it will eventually improve to 10%. They also saved about 2% in building costs for the new cleaning stations compared to their original budget.

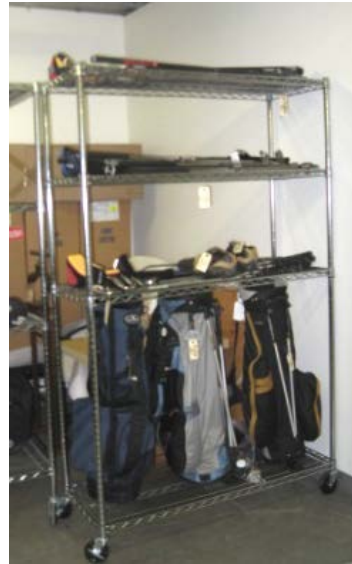
Mack said that involving L&I's ergonomist had a positive effect on morale. "Our employees really felt we had their best interests in mind."

ServiceMaster's home-grown ideas to make their work easier

- They bought easy to move tables for staging and sliding items. These also allow for a flexible layout.



- They bought more rolling racks. Rolling racks reduce carrying and may help reduce re-handling of items.



- They made their own rolling rack to transport rolls of packing materials to the point of use within the plant. Now workers don't have to manually lift and carry them. It's much faster and easier to push the rack.

