



Konecranes Biomass Crane Helps Whistler Resort Manage Waste, Reduce Carbon Footprint

Features and Benefits

Burns less fossil fuel

Reduces site pollution from biosolids

Eliminates diesel fumes inside the facility

Maximizes floor space

Helps control operating / disposal costs

Industry Group: Crane Manufacturers Association of America (CMAA)



The Opportunity

When a municipal waste composting facility outside Vancouver shut down because of odor problems, a new facility was sited in the Resort Municipality of Whistler. The process transforms a mixture of sewage solids, food waste and waste wood into high-quality compost, and replaces trucking garbage to Washington State at a significant cost.

The original facility used front-end loaders to transport the raw materials to a mixer as the first stage in the process. But the new facility, designed to process between 16 and 20 tons of biosolids per day and located in a city known for its high environmental standards, wanted to operate more cleanly than had been possible using front-end loaders. The engineers designing the new facility decided to specify an electric rather than diesel wood chipper, and a crane to handle the raw materials.

The Solution

Konecranes supplied a 5-ton radio-controlled bucket crane, CMAA class “E”, operating on a 60’ span. The grab holds 2.5 cubic meters, and the crane is equipped with DynAPilot antisway technology and the ability to weigh each load. Working from bins, the crane picks up a full bucket of wood chips and deposits it into a mixer hopper, followed by half a

bucket each of food waste and sewage solids, and another full bucket of wood chips. This material is then mixed and transported by conveyor into one of two parallel production tunnels, where it is heat-processed for about 14 days, emerging at the other end as odorless compost.

Using a crane to mix waste minimizes site contamination, as any spillage falls into the bins or the mixer itself. The facility is enclosed to reduce odor, so eliminating diesel fumes from front loaders inside the building improves conditions for the operator as well as reducing the carbon footprint. Also, fewer workers are required to man the operation.

Return on Investment

The ability to compost its waste rather than ship it to a landfill now saves the community a minimum of \$1,200. per day on 10 tons of waste, or at least \$37,000. per month. Additionally, two blends of compost aged for six months can be sold by the city for \$35. per ton.

And the customer says

There were some significant reservations from experienced operators of plants on our proposed design solution of using a crane rather than a loader. Now, they and we are in agreement that probably the most pleasant surprise of the entire project is how well that crane has worked," says Whistler Environmental Operations Manager Ron Sander.

How important is crane reliability to the process? "Without the crane functioning, the plant doesn't function, and our ability to deal with biosolids comes to a halt," Sander said. "We can receive biosolids for only two or three days before we would be forced to ship it at a significant cost."



Konecranes America, Inc.

7300 Chippewa Boulevard

Houston, TX 77086

800-231-0241/281-445-2225

steve.kosir@konecranes.com

www.konecranesamericas.com