

# Dealing with dust

A range of strategies to manage airborne hazards saw *EnviroWaste Services* win the 'best initiative to address an occupational health hazard' category at the 2007 *Safeguard* awards. MIRIAM BELL found out what was behind the winning project.

Robyn Stewart and Shane Burke

**W**hen solid waste and recycling company *EnviroWaste Services* found high concentrations of dust, fungal spores, faecal coliforms and other bacteria in the air at its transfer stations and recycling facilities, it knew it had to take action for the sake of workers' health.

But when health and safety advisor *Robyn Stewart* started investigating to see how others had dealt with the problem, she could not find any similar companies, either in New Zealand or overseas, who had even considered the matter from the perspective of employee health. As a former nurse, the potential for health problems from excessive airborne dust was obvious to her, but to her surprise, she discovered that other waste management companies had only ever considered air quality from an environmental perspective.

With no ready-made solutions available, the company had to come up with something of its own, and the result was a multi-pronged – and groundbreaking – solution.

#### Stop-gap measure

First of all, Stewart and her manager, *Shane Burke*, set up a team – including staff from transfer station operations, sales, refuse collections, and the environmental and OHS teams – to deal with the problem.

As a stop-gap measure, disposable respirators were provided to reduce the immediate risk for transfer station staff. They were trained to wear them correctly, and required to do so until a permanent dust reduction solution could be found.

The search was on for an appropriate dust extraction system but in the meantime the team progressively introduced a range of other initiatives, including:

- Comprehensive staff training;
- An increased emphasis on reporting and monitoring any dusty loads that arrived at facilities;
- The introduction of a new dust collection system;
- Modifications to reduce site machinery exhaust emissions;
- Changes to site machinery so it could not be operated unless cab doors were closed and the air-conditioning working; and
- Customer education.

## SHE COULD NOT FIND ANY SIMILAR COMPANIES WHO HAD EVEN CONSIDERED THE MATTER FROM THE PERSPECTIVE OF EMPLOYEE HEALTH.

#### Multi-purpose mist

Stewart says the team looked at several different dust extraction systems before settling on a misting system. This system uses atomised water droplets to capture dust particles, making them heavier so they settle quickly rather than remaining in the air. One of the concerns with such system is that it can create a damp environment, as well as adding weight to the waste stream. However the fine nature of the droplets means that the amount of water involved is quite small. As well as reducing dust, the mist also acts as a coolant, keeping heat down in the transfer stations, for the benefit of both staff and machines.

Additives can also be put into the misting liquid, to minimise odours and eliminate e-coli and faecal coliform bacteria. These additives were chosen carefully to ensure there were no associated risks to staff, but even so the company has adopted a cautious approach, putting them in at night, when there are few people around, adding less than the suggested levels, and only doing so when there is a particularly smelly load.

"Staff at all levels of the company were working on trying to limit the dust, because everyone was concerned and willing to express their concern," Stewart says. "As a result, we've adopted a number of new processes. We feel it was an exciting project to work on and, while we were all pretty diligent, the project basically built a momentum all of its own."

#### A work in progress

Subsequent air testing in the transfer station has shown a significant reduction in airborne dust levels, but the company plans to continue monitoring the situation indefinitely. It doesn't regard the problem as 'solved', and, instead, considers further enhancement of air quality at its sites as a work-in-progress.

Stewart says the company believes the

entire waste management industry needs to work together on the issue, and for this reason, it has shared its findings with others in the industry – including its direct competitors. As a member of the WasteMINZ safety forum, the company has also helped develop some industry strategies and guidelines, including the best practice guide, *Health & Safety in the Waste Industry*.

Stewart says workplace health and safety is important at EnviroWaste, with both the current managing director and his predecessor placing a great emphasis on it. This senior management buy-in has seen health and safety put at the top of the agenda for all meetings, at every level of the company.

#### Establishing a culture

This hasn't always been the case, however.

"Up until about five years ago, health and safety practices were conducted sporadically and inconsistently," Burke says.

After significant prompting from the board, however, a new approach to OHS management was implemented. A robust business management system was established, with a component of all managers' bonuses tied to health and safety, and a framework of safety, health and environment reps established and trained. These reps then worked with management across the company, to identify gaps in health and safety practices and develop more effective systems and procedures. A new CEO and the introduction of the advisor role about four years ago helped the process along.

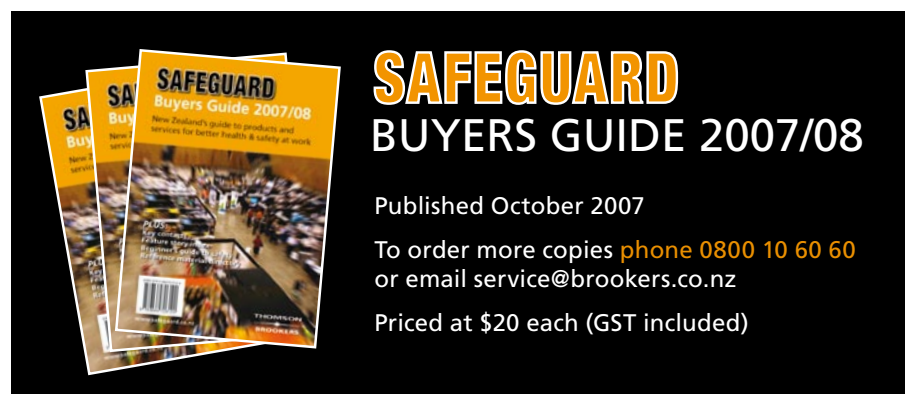
Stewart says all of the company's health and safety efforts evolved from that point.

"There has been a lot of research behind all our efforts and initiatives, and we work hard to continuously improve. As a result, we have seen much improvement in our processes, systems, injury rates and incident reporting."

#### Making OHS a value

However, despite all the improvement, she says the company still has more to do in the name of health and safety. Recently Burke and Stewart identified a significant gap in the OHS culture, with health and safety being seen by many as an addendum to daily activities rather than an integral part.

As a result, the company is working on a set of new initiatives to address that gap. These initiatives will emphasise leadership and a values-based approach, Stewart says, but their ultimate goal is to succeed in making workplace health and safety an intrinsic workplace value, rather than an extrinsic one, for all EnviroWaste staff. ■



**SAFEGUARD**  
**BUYERS GUIDE 2007/08**

Published October 2007

To order more copies phone 0800 10 60 60  
or email [service@brookers.co.nz](mailto:service@brookers.co.nz)

Priced at \$20 each (GST included)