

Daisy Bell set to help with avalanche safety

By Jonathan Grass | JUNEAU EMPIRE

Avalanches around the Snettisham line have always been a problem for Alaska Electric Light & Power. Yet, a new technology in the U.S. may help ease the cost and hazards of controlling these snowy slides. AEL&P unveiled its new Daisy Bell Helicopter Avalanche Control System on Tuesday. The Daisy Bell hangs 150 feet from a helicopter and moves snow by emitting precise blasts using mixtures of oxygen and hydrogen. The idea is this device, which looks like a space capsule, will replace the need for moving snow with explosives.

The Daisy Bell was introduced by AEL&P's avalanche forecaster, Mike Janes. He said while avalanches will remain a presence around Snettisham, this machine will offer some distinct advantages in controlling them.

One of those advantages is for the actual lines and tower, which can be endangered by the very methods previously used to keep them functioning.

"It completely eliminates the possibility of an explosive hitting a tower," said Janes. "We don't have to worry about explosives sliding."

He added, "We take great pains to make sure the blasts don't make slides hit the towers."

He said using gas blasts set off by remote control is much safer for the people as well as the equipment.

Another advantage is efficiency. Janes said suspending the machine by helicopter makes it very mobile and able to accurately target an area and adjust positions. He added the blasts can be set off quickly and more efficiently than with explosives because the operators don't have to wait for them to go off.

Adding to the efficiency is smaller flight crews. Janes said the Daisy Bell only requires a single operator plus a pilot, while using explosives requires at least a spotter, handler and pilot.



The other savings aspect came in terms of operational costs. Janes estimated each shot of gas will cost less than \$10 each. He said each shot of explosives would cost \$80.

"We're hoping this will make the operation cheaper," he said.

Janes said it was too early to tell an exact number of times the Daisy Bell will be taken out in its first season, but guessed it could be around 15 times. He said last winter called for between 10 and 12 missions but more have been called for in the past.

"It all depends on the winter," said Janes.

Janes was accompanied by Bruno Farizy, a project manager of natural hazards engineering within MND Engineering, the company that led to the Daisy Bell's development.

Farizy said this technology is used more in Europe, but there is only one other in this country, and it's found in Utah. He said one such device has been used 2,000 times in one season in Europe.

The two men said MND representatives got in touch with AEL&P last year and together decided Juneau would be a good place to house the technology in one of its early uses in the country. Farizy said they visited other areas in the state but ultimately brought it to AEL&P

The Daisy Bell costs \$130,000 and weighs around 1,100 pounds, including gas bottles. Janes said this will be no problem for the helicopter or the pilot, as Coastal Helicopters' pilots are used to sling loading. He said the air blasts from the bottom are quiet and produce no ricocheting movements.

Gayle Wood, AEL&P's director of consumer affairs, said the company's use of the new device will not affect utility bills. She said she is hopeful any operational changes will result in cost savings for the company and customers.

Blasts are usually delivered with the machine around 20 feet from the snow, but this distance is adjusted for conditions like dry or stubborn snow. It can even be used just above the snow in such cases.

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