

Tuesday 28 Oct 2003

Director Nicole Matthews
COAG Bushfire Inquiry,
Office of the Prime Minister and cabinet,
Barton ACT 2600

Dear Director Matthews,

**INQUIRY ON BUSHFIRE MITIGATION AND MANAGEMENT
CALL FOR SUBMISSIONS**

Watching the news on bush-fire fighting over the years with the huge damage to so many lives and property, I keep feeling there is faster and more efficient way to stop the fires. I would like to submit a suggestion based on knowledge and information for a better bushfire mitigation and management infra-structure.

Picture a very hot day over the whole state on fire alert with lookouts at strategic high points covering the whole region to give an early alarm on sighting smoke or fire. From experience, certain likely hot spots have been identified and special helicopter-tanks are despatched to wet these spots with a shower of water to minimise or even remove the risk of ignition.

These heli-tanks then return to their strategic bases spread around the country near designated large bodies of fairly calm waters like sea bays, harbours, rivers or even reservoirs. The aircraft could be specifically modified Mi26M, 226A Sergei, Ospreys, Carter Copters, or the Sikorsky sky-crane but with payloads of about 27,000kg and fitted with pontoons straddling a rotatable cylindrical tank which is its belly. The tank has special lips at its lengthwise opening preventing spillage in transit with no sealing problems.

Approaching the water, the emptied tank has its opening facing downwards. As the heli-tank settles on the water, the tank is rotated until it is full of water with the opening uppermost within 30 seconds to a minute. It takes off with its full payload to an allocated base built to accommodate the pontoons and tank. It can even remain on the water near a base. They are all ready to go.

On a fire call, the heli-tank takes off to position itself upwind at the front end of the fireline and rotates the tank as it moves down the line. The special lip creates a broad continuous and consistent ribbon of water to blanket the line of fire more accurately and effectively by covering a larger area than the dangling bucket system now in use. Other heli-tanks arrive to continue their drops in sequence. The heli-tanks then head for the nearest pre-determined body of water to reload quickly and continue the barrage.

With a bigger payload, more time is spent laying water on the fire than flying to reload. Fewer lives will be endangered on the ground because the fire is not allowed to spread as it is accessible only to the heli-tanks.

The aim of the whole system will, firstly, be to prevent the probable ignition of hot-spots by pre-dousing with man-made showers, and secondly, on early detection, quickly reach the site with effective water blanketing. The lips on the tank will provide the showers when rotated one way and a ribbon of water the other way. It can be demonstrated that a ribbon-like sheet of water will cover the fire more effectively than a shower which will mostly evaporate from the heat of the fire before it reaches the fire. The bucket system loses a lot of water in transit and the distribution of water is mostly effective in a small spot only and hard to control.

The latest heli-tank in North America uses a tank under a chopper. The tank has two sliding doors that open to dump its load and uses a siphon and fast pump to fill the tank while hovering. While this system dumps its water in a slightly longer period than a hanging bucket, the sliding doors make the discharge hard to control.

We should ask helicopter pilots whether it is easier and faster to fill a tank with a siphon or a bucket while hovering or to sit a chopper on the water and rotate a tank.

A fleet of these heli-tanks would therefore give us the ability to prevent a fire from starting in otherwise inaccessible and remote areas and nip the fire in the bud in these areas before it has a chance to spread. It will also reduce the amount of manpower needed and very often in futile efforts and reduce the risk to them. If this system works in this state, it can work in the whole country and the world, for that matter.

Heli-tanks could be designed and built in Australia, NSW, in particular, to create jobs and export demands for this country. I'm sure such a product will benefit Australia and set it up as the leading experts in bush and forest fire-controllers. The money invested in them should be very much less than the cost of the present system added to all the losses and damages that are incurred every time these holocausts occur. The cost of lives and properties that can be saved would be immeasurable.

With accessories or minor modifications, these heli-tanks could also be used for rescue operations such as in high-rise buildings that ground facilities cannot reach. With a higher payload and detachable tanks, they can even be used as more effective sky cranes. Other possibilities must surely exist that are waiting to be discovered.

I trust you can sense a possibility that this seemingly simple scenario could work and I would be very happy to be a part of the team to make this a reality.

Thank you for your time and I do hope to hear from the inquiry..

Yours very sincerely,

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