THE USE OF "FIRETROL" IN MOPPING UP

by R.A. Kitson

Mopping up hot edges is a tedious and time-consuming job, particularly in the karri forest where logs and woody ground material are more numerous and larger than elsewhere. A typical example of the problem is the "rule-of-thumb" for control burning in the late spring or autumn; one day's burning means two days mopping up.

Therefore any means of making mopping-up easier and quicker would be a great advantage and result in safer edges, cheaper control burning and more efficient fire suppression.

The use of the water-soluble retardant "Firetrol" in heavy duties appears to be a break-through in this direction. A number of trials have been carried out at Northcliffe this summer.

THE TRIALS

In a number of tests, different ratios of Firetrol and water were used. The ratios were:

(8 parts water to 1 part Firetrol
(16 " " " 1 " Firetrol
(25 " " " 1 " Firetrol
(40 " " " 1 " Firetrol

Naturally it was found that the 8 to 1 mixture was the most effective, but even the 25 to 1 mixture did an outstanding job.

Excellent results were achieved using the 8 to 1 mixture. Five logs were sprayed with the mixture and only one log required 2 applications. This one log was dealt with in a matter of seconds. All the other logs were completely extinguished with the first treatment.

These burning logs were very hot before treatment and it appears that the hotter the material the quicker and better the result.

One particular log was surrounded by an area of extremely hot coals, and had been rolled out of its hot bed in the ground by a dozer. The area was $2m^2$ and was sprayed for 1 minute (approx 4 gallons of mixture) and the log was blacked out.

Using the 16 to 1 ratio very good results were also achieved. A tank of 160 gal. capacity lasted 2-3 hours of normal mopping up. Very seldom was a second spraying of hot material necessary. With straight water under these conditions, the tank would have only lasted about ½ hour.

A mixture of 40-1 was used in the same pumper unit as the 8-1 and 16-1 trials and it was found to be less effective, but still much better than a mixture of comprox and water.

The 8-1 mixture was given a short test on running fire suppression and the results were really amazing.

A H/D tank containing 300 gals of water with Firetrol added at a ratio of 25-1 was then used. Results were very good and the mixture lasted for 4 hours with only 1 log needing a second application. This was on standard mopping up of the edge of a January control burn at "The Thousand Acres."

A casuarina tree which had been scorched and pushed over was ignited and flames from the needles had reached a height of 1 - 1.5 metres when the 8-1 mixture was applied. The flames were extinguished almost instantly and the material was completely out.

About one week later this tree was inspected and it was found that some of the mixture was still visible on the needles. Tests were carried out by igniting small heaps of Firetrol treated and untreated needles. It was found that the treated needles did not ignite or burn as readily as the untreated needles and left a heavier black ash when compared to the very light, grey ash of the untreated material.

CONCLUSIONS

These tests were the first tried in the Southern Divisions and further trials with Firetrol using 16 and 20-1 mixtures in H/D's and a pack spray test using 4-1 ratio are planned for the autumn.

We plan to arrange a field day in the Autumn season and invite members of local brigades to attend.

Surely it would be of interest to all persons involved in fire control.

Fire Research Manjimup intend carrying out trials with Firetrol in the near future. Perhaps when these trials are complete more valuable information will be available.

It certainly appears that the use of Firetrol will revolutionize mopping up fire edges in heavy fuels. Although the Firetrol costs about 50c per gallon, if it makes a heavy duty load last five times as long, costs will soon break even.