

Broadmeadows tyre fire

Air quality

Environment Protection Authority Victoria (EPA) monitored air quality during a tyre fire in Broadmeadows that began on Monday, 11 January 2016 at the Tyre Crumb Australia facility. The Metropolitan Fire Brigade (MFB) led the incident response with support from other emergency management agencies. EPA's role was to monitor air quality and report back on the results. This fact sheet summarises the results.

FACT SHEET

PUBLICATION 1618
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Authorised and published by EPA Victoria,
200 Victoria Street, Carlton VIC 3053

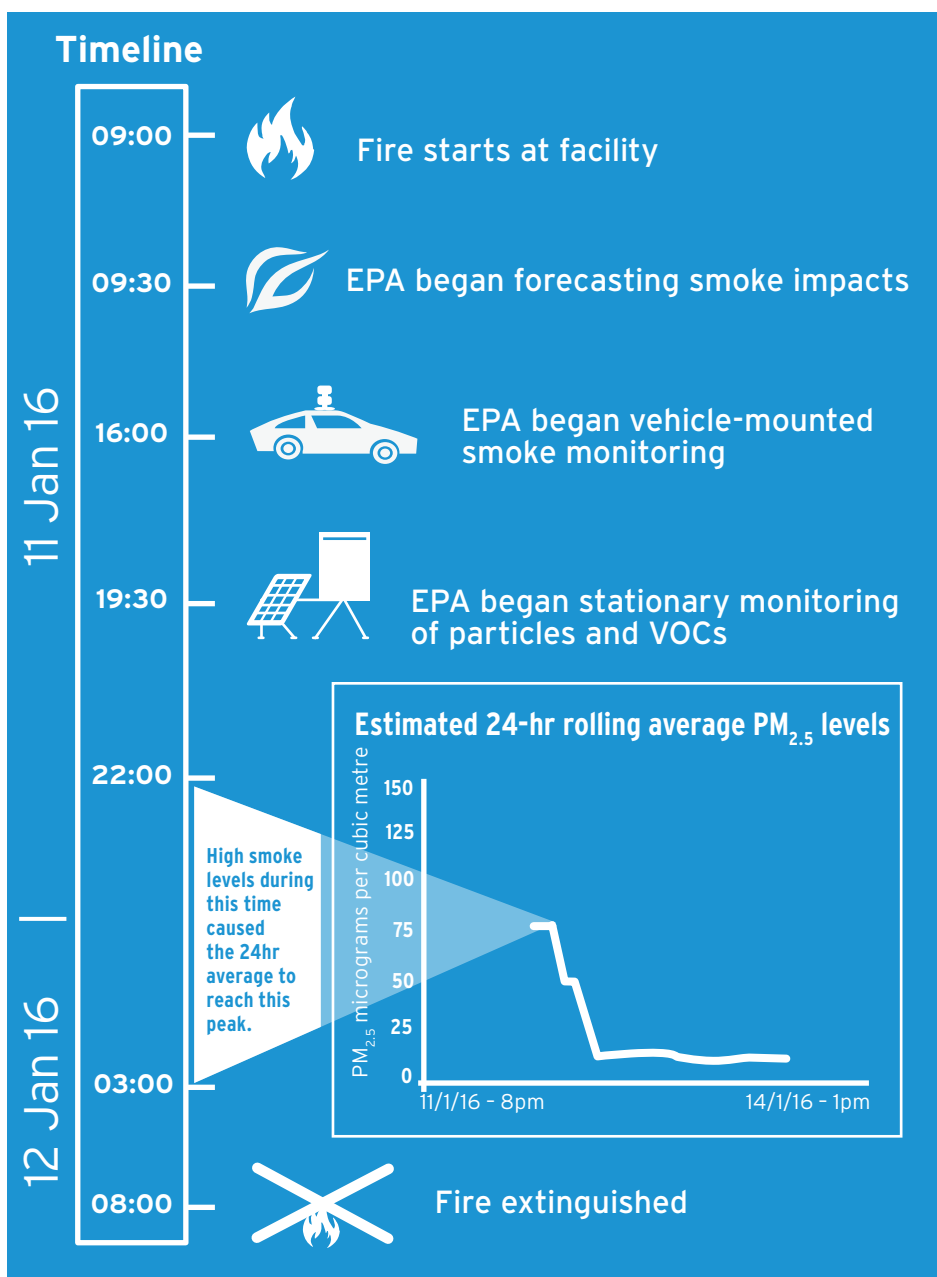
What did EPA test for in the smoke?

When tyres burn, they produce thick black smoke that can contain:

- **fine particles called PM_{2.5}**. These particles are smaller than 2.5 micrometres in diameter, which is small enough to be breathed deep into the lungs. This can cause health effects, particularly in children, the elderly, pregnant women and people with existing heart or lung conditions (including asthma).
- **volatile organic compounds (VOCs)**. These can be released from the burning rubber, and can be harmful at high levels.

Our air monitoring at Wharton Avenue, Broadmeadows picked up peaks in PM_{2.5} levels to the north of the fire between 10.00 pm on Monday 11 January and 3.00 am on Tuesday 12 January. This was the same time that the MFB was shifting some of the burning tyres to gain better access to put out the fire quickly. This activity is likely to have caused some excess smoke.

These peaks meant that the estimated average air quality over the first 24 hours of monitoring reached the 'unhealthy all' health category, before returning to normal levels. [Read about air quality categories and cautionary advice on EPA's website.](#)



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EPA also tested the air for 78 different types of VOCs at Wharton Avenue, Broadmeadows and Tempy Court, Dallas. We found low levels of toluene and benzene in the Wharton Avenue sample, but these levels were below relevant criteria. No VOCs were found in the Tempy Court sample.

What was done to limit smoke exposure?

Throughout the fire, nearby residents were advised to shelter indoors and close windows and doors. Doing this will have helped limit people's exposure to high PM_{2.5} levels in the smoke, and protected their health.

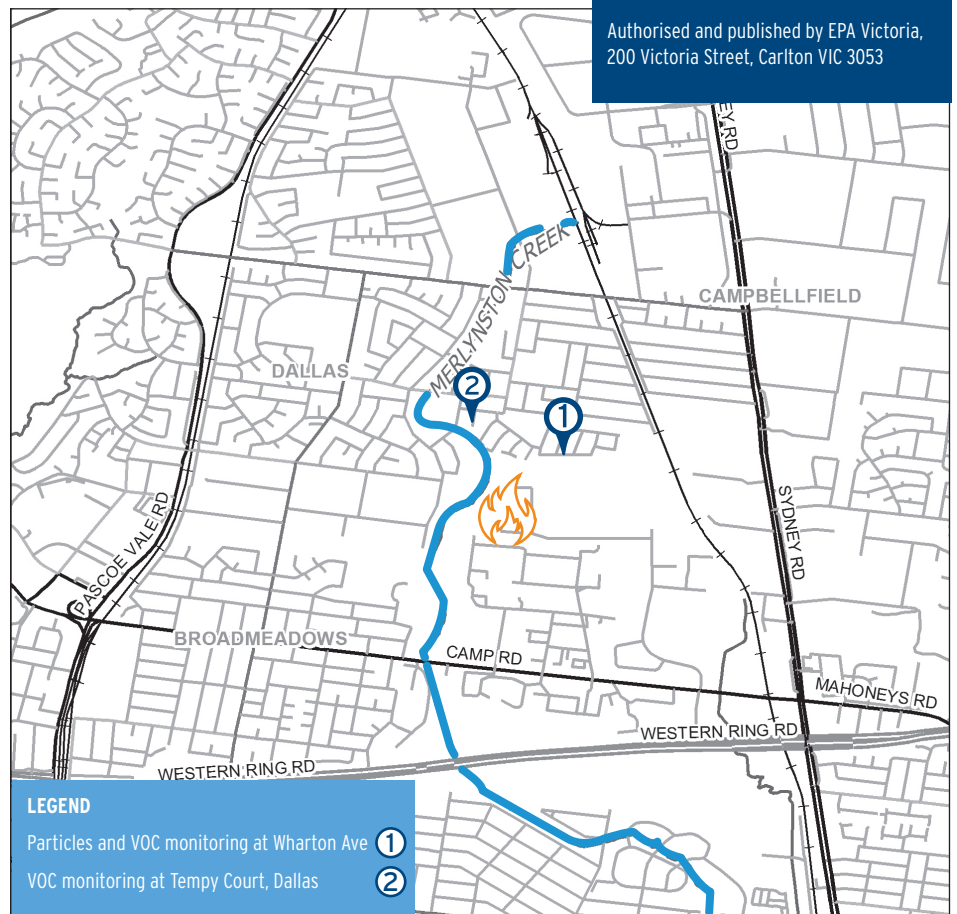
How can we prevent tyre fires happening elsewhere?

EPA is taking action to reduce waste tyre stockpiles by enforcing new regulations on how waste tyres are stored. EPA will be undertaking compliance inspections, with support from Victoria's fire services, to minimise the fire hazard associated with storing large volumes of waste tyres.

Are there any other environmental impacts from the fire?

Apart from air, EPA also considered potential impacts to nearby waterways and soil.

EPA and Melbourne Water monitored water quality in local waterways during and after the event. Melbourne Water advised people to avoid contact with Merlynston Creek in Jack Roper Reserve in Broadmeadows due to potential run-off from the tyre fire site. Warnings were put in place, advising people to avoid contact with the water, and prevent their pets from entering or drinking the water. Water quality in Merlynston Creek at Jack Roper Reserve has now returned to pre-fire levels.



What are the implications for the site operator?

The site operator - Tyre Crumb (Vic) Pty Ltd - has been served with two clean up notices under the *Environment Protection Act 1970*. The notices require the operator to assess the level, extent and quantity of contaminated soil, sediment, waste (including fire-impacted materials), infrastructure, and surface water on and from the premises. They are also required to remove, treat or contain any of these impacted materials. EPA is also investigating whether there was any breach of the law.

Further information about air quality

For further details on this incident, the response, and air monitoring results please see EPA's report *Air monitoring results: Broadmeadows Tyre Crumb Australia fire* (Publication 1617 March 2016) on EPA's website.

To see air quality monitoring at other locations, the [EPA AirWatch map](#), available on EPA's website, shows near-real-time air quality results from stations in our network.