

TECHNICAL MEMORANDUM

DATE 20 September 2021

Project No. 19130795-022-TM-Rev0

TO Whom It May Concern,

CC Peter Black (AkzoNobel)

FROM Cameron McNaughton

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AIR QUALITY MONITORING AT AKZONOBEL SUNSHINE – VOC PLAIN LANGUAGE SUMMARY

Ambient air quality is being monitored at the AkzoNobel site located at 51 McIntyre Road, Sunshine North. The monitoring program includes 1-in-6 day, 24-hr sampling of volatile organic compounds (VOCs) using passive Radiello samplers. The VOCs being measured at eight fenceline locations include:

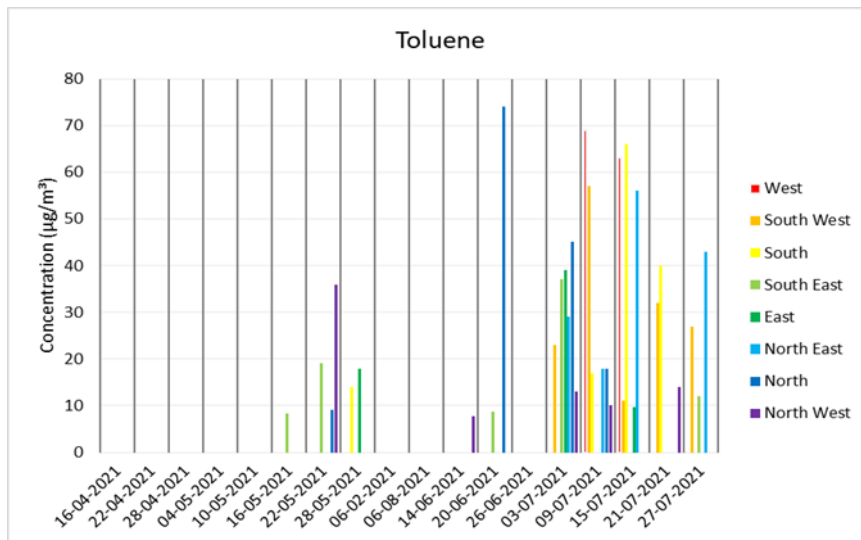
- a. Toluene;
- b. Ethylbenzene; and
- c. Total xylenes.

On site, temperature, wind speed and wind direction are also measured using a small meteorology station. Laboratory analysis of the Radiello samplers is undertaken at Golder's NATA-accredited air quality laboratory in Melbourne.

The figures that follow summarize results of the VOC monitoring from April until July 2021. The figures include a comparison of the results to the Victoria Environment Protection Authority's Draft Air Quality Assessment Criteria (AQAC).

To date the fenceline monitoring has consistently detected at least one of the target VOC compounds, at one or more locations, during each round of 1-in-6 day monitoring (Figures 1, 2 and 3). However, the observed concentrations of ethylbenzene and total xylenes are well below their respective 24-hr draft AQACs. For example, the maximum observed ethylbenzene concentration is less than 0.25% of the draft AQAC for ethylbenzene (Figure 4), and the maximum observed total xylene concentration is less than 2.5% of the draft AQAC for total xylenes (Figure 5).

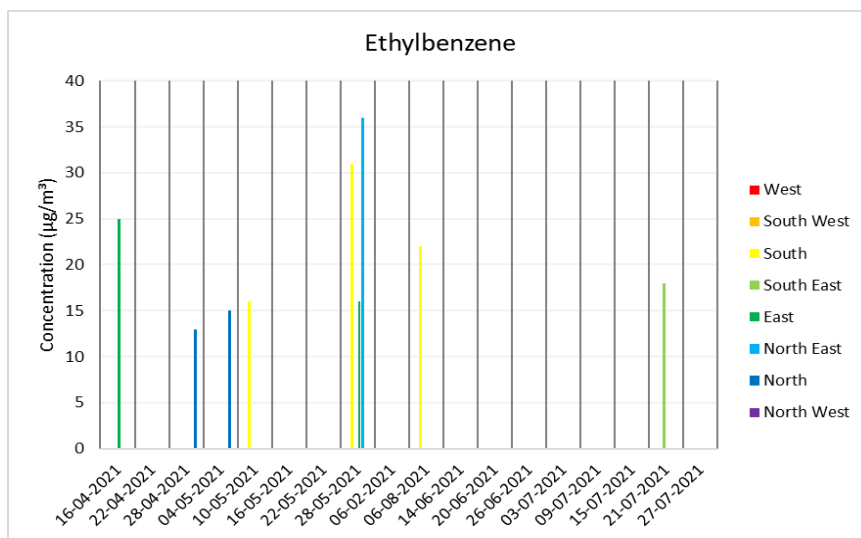
The draft AQACs are health-based air quality criteria; i.e., they represent a concentration above which there are potential health risks for sensitive persons. The results of the air quality monitoring from April to July 2021 indicate the observed concentrations of ethylbenzene and total xylenes at the AkzoNobel fenceline are a negligible risk to potentially sensitive community receptors (e.g., children or the elderly in nearby residences).



Toluene

- Limit of detection is 10 µg/m³
- There were 32 detections between April and July 2021
- Maximum value was 74 µg/m³
- There is no draft AQACs for toluene

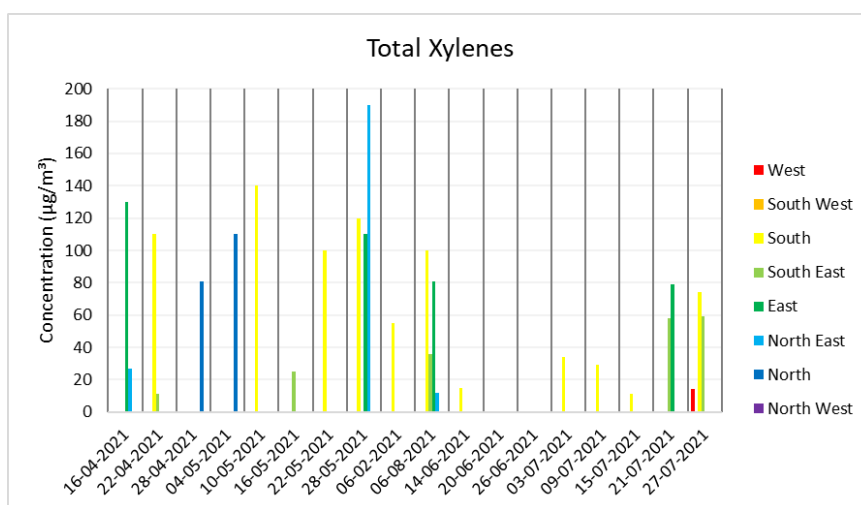
Figure 1 : Fenceline 24-hr average toluene concentrations measured from April to July of 2021



Ethylbenzene

- Limit of detection is 10 µg/m³
- There were 9 detections between April and July 2021
- Maximum value was 36 µg/m³
- 0.17% of the 24-hr draft AQAC of 21,712 µg/m³

Figure 2 : Fenceline 24-hr average ethylbenzene concentrations measured from April to July of 2021



Total Xylenes

- Limit of detection is 10 µg/m³
- There were 26 detections between April and June 2021
- Maximum value was 190 µg/m³
- 2.2% of the 24-hr draft AQAC of 8,685 µg/m³

Figure 3 : Fenceline 24-hr average total xylenes concentrations measured from April to July of 2021

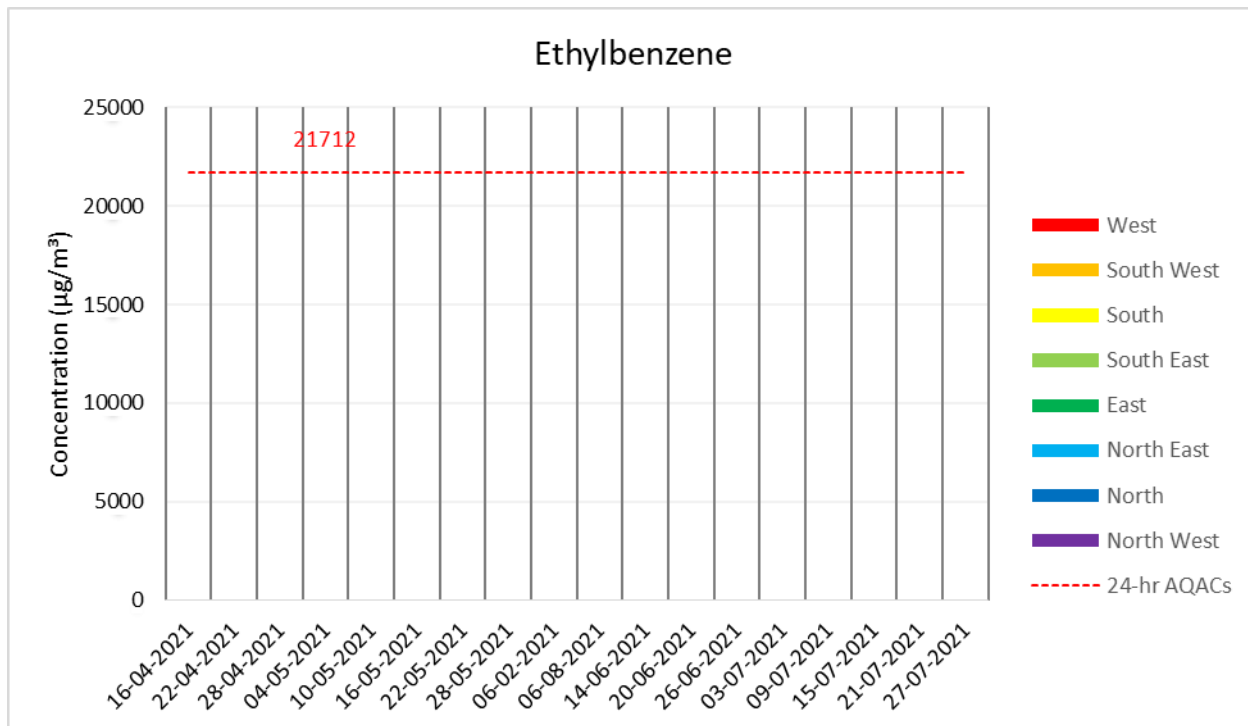


Figure 4 : Fenceline 24-hr average ethylbenzene concentrations measured from April to July of 2021 compared to the (draft) 24-hr air quality assessment criteria.

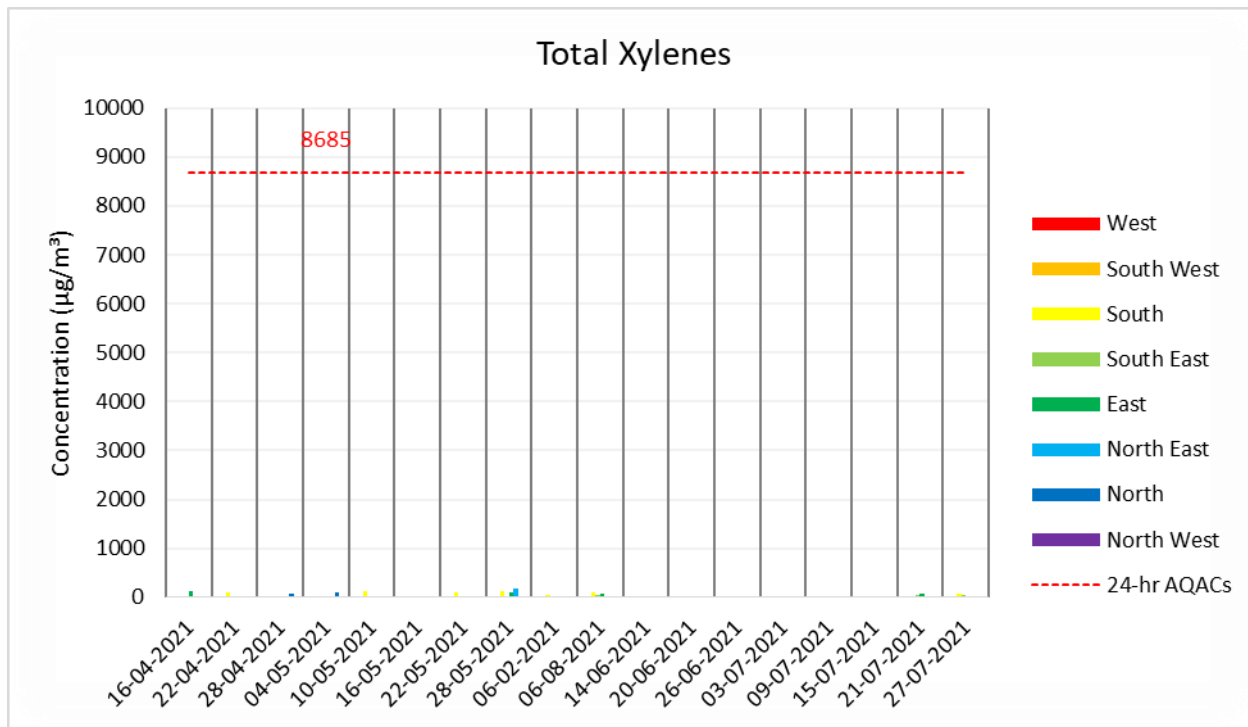


Figure 5 : Fenceline 24-hr average total xylene concentrations measured from April to July of 2021 compared to the (draft) 24-hr air quality assessment criteria.

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