

## Port of Tauranga Methyl Bromide Fumigation Monitoring – Interim Report 12

Fumigation and venting details can be found in Table 1.

Table 1: Monitoring details

Date	21/08/2020
Fumigation Type	Vessel Hold – Berge Phan Xi Pang
Fumigation amount (kg) – during 1hr sampling	<669 <sup>^</sup>
Fumigation Location	Berth 9
Venting Time	19:48-01:28
*Sample time (1hour)	19:49-20:59
*Predominant wind direction over 1 hour sample	NWW
*Average wind speed over 1 hour period	No measurements
Sample date (24 hour)	21/08/2020 – 22/08/2020
Sample time/s (24 hour)	19:18 – 19:18 (location 26 and 28)
Other venting in the 24 hour period	3 additional holds on the ship. No log rows

<sup>^</sup>Hold 4 only partially opened over the 1 hour period

•1 hour Sample times differ from the total venting time i.e. venting went on for longer than the 1 hour sample period

\*From observations at the time of sampling, measured met data is provided in a separate document.


Table 2: Fumigation and Venting Details 21/08/2020

Hold	Venting Time	Methyl Bromide used (kg)	*Pre-vent Concentration (ppm)
1	21:50-22:47	523	N/A
2	23:08-00:02	667	N/A
3	00:29-01:28	670	N/A
4	19:48-21:22	669	N/A

\*Data not provided by Genera

Map 1: Fumigation and Sampling Locations 21/08/2020

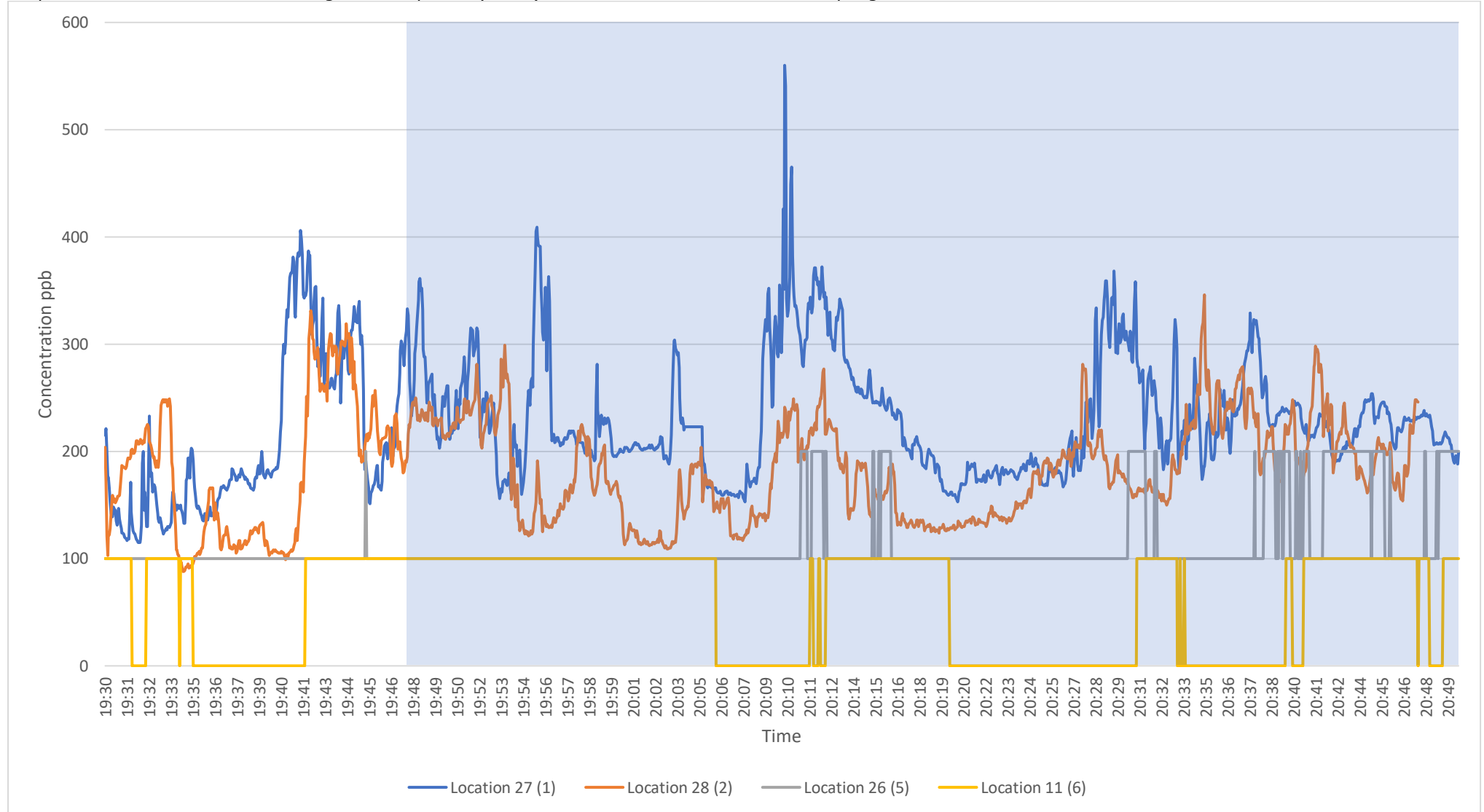


 Vessel hold venting (please note locations are only approximate)

 Sample locations

1-hour canister sampling and TVOC monitoring was undertaken at locations 11, 26, 27 and 28 from 19:49 – 20:49. 24-hour canister sampling was also undertaken at location 26 and 28. The average and peak TVOC measurements for the sampling period are shown below in Table 3 and Graphs 1-5. Canister sampling results can be found in Table 4.

Graph 1: Real-time Total Volatile Organic Compound (TVOC) measurements at all 1-hour sampling locations on the 21/08/2020



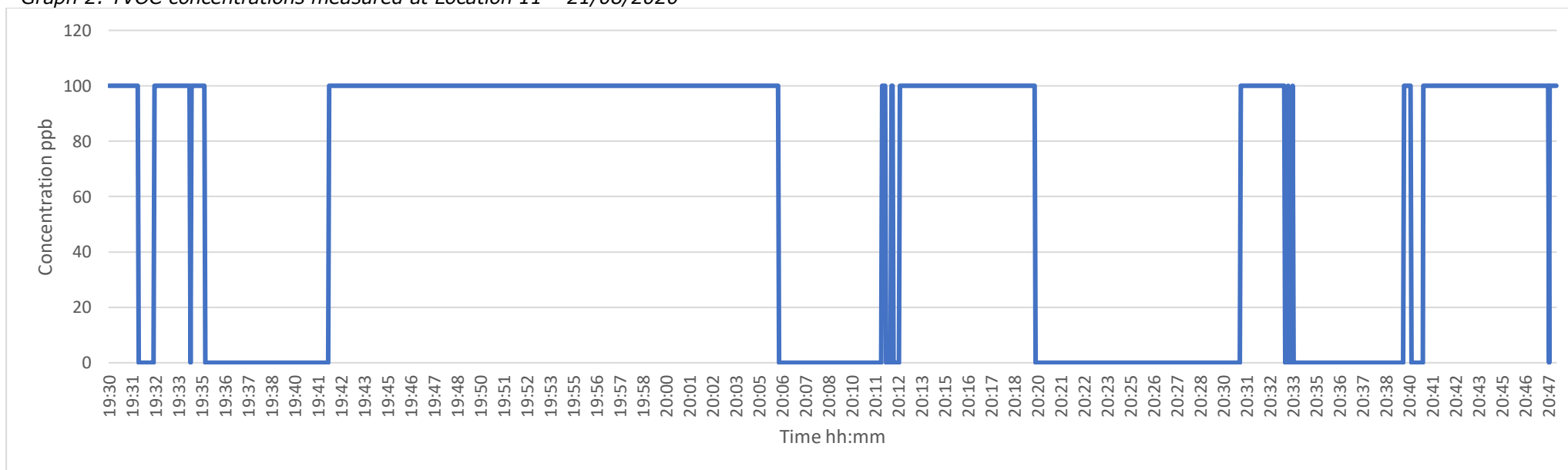
Notes: 19:49 start of canister sampling. Please note: concentrations have not been corrected for methyl bromide and measurements will account for all VOC's including methyl bromide

Table 3: Average and peak real-time TVOC measurements on the 21/08/2020

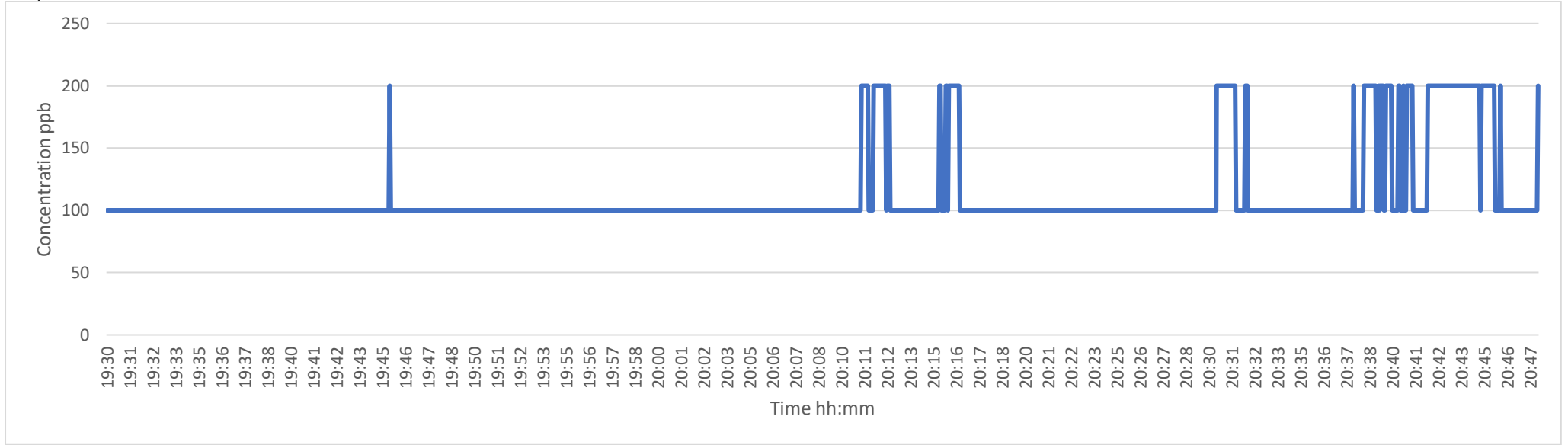
Location (as shown on Map 1)		Average TVOC measured over sampling period (ppb)*	Peak TVOC measured over sampling period (ppb)*
11	Astrolabe Street	60	100
26	Isuzu Cal	115	200
27	On the Port - C3 Mechanical Workshop	232	560
28	KiwiRail – Opposite Ops Office	183	346

\*Concentrations have not been corrected for methyl bromide

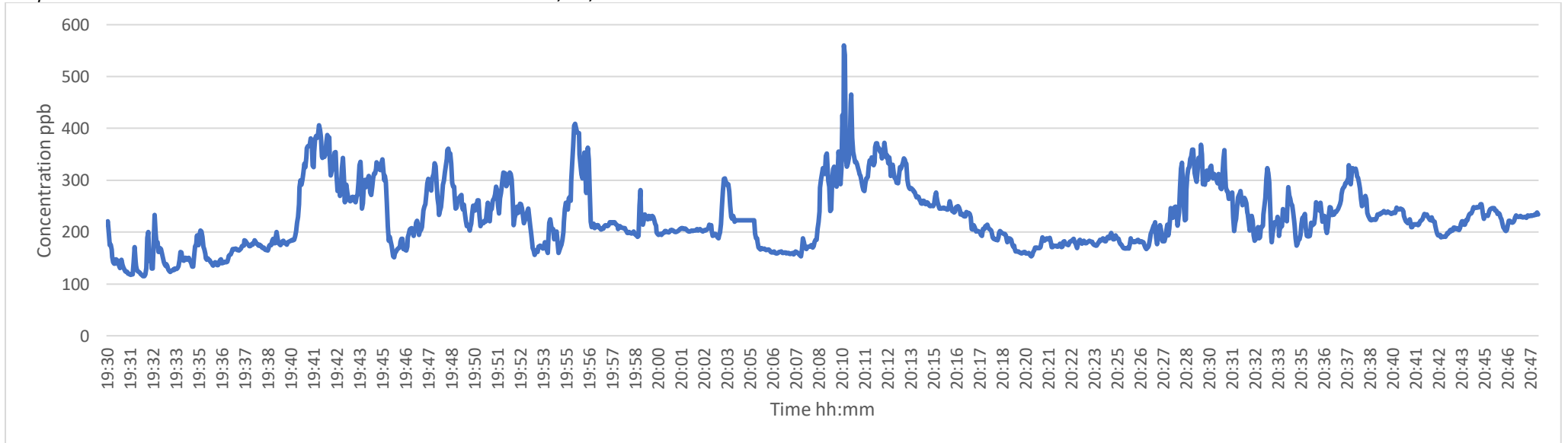
Graph 2: TVOC concentrations measured at Location 11 – 21/08/2020



Graph 3: TVOC concentrations measured at Location 26- 21/08/2020



Graph 4: TVOC concentrations measured at Location 27- 21/08/2020



Graph 5: TVOC concentrations measured at Location 28- 21/08/2020



Table 4: 1-hour and 24-hour Canister Sampling Results 21/08/2020

Location (as shown on map above)		Sample Number	Sample length	Sample Time	Canister size	Methyl bromide Concentration (ppbv)
11	Astrolabe street	19827-2108-11	1 hour	19:49-20:49	1.4L	<1.7
26	Isuzu Cal	19827-2108-26	1 hour	19:49-20:49	1.4L	<5
		19827-2108-26A	24 hour	19:24-19:24	6L	137
27	On the port - C3 Mechanical Workshop	19827-2108-27	1 hour	19:49-20:49	1.4L	<6
28	KiwiRail – Opposite Ops Office	19827-2108-28	1 hour	19:49-20:49	1.4L	<4
		19827-2108-28A	24 hour	19:18-19:18	6L	29.9