

Port of Tauranga Methyl Bromide Fumigation Monitoring – Interim Report 13

Fumigation and venting details can be found in Table 1.

Table 1: Monitoring details

Date	6/10/2020
Fumigation Type	Log stacks
Fumigation amount (kg) – during 1hr sampling	80
Fumigation Location	Fumopad
Venting Time	16:30-00:03
*Sample time (1hour)	17:51-18:51
*Predominant wind direction over 1 hour sample	West (port met data average)
*Average wind speed over 1 hour period	*Not recorded
Sample date (24 hour)	06/10/2020 – 07/10/2020
Sample time/s (24 hour)	17:47-17:55 & 17:50-17:57
Other venting in the 24 hour period	Four Logs rows on Reefa

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

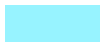
*From observations at the time of sampling, measured met data is provided in a separate document.

Table 2: Fumigation and Venting Details 06/10/2020

Row	Log Volume (JAS)	Covered Volume (m ³)	Methyl Bromide used (kg)	Pre-vent Concentration (ppm)	Methyl Bromide Released (kg)
D9	372	658.8	80	15200	17.5

Map 1: Fumigation and Sampling Locations 6/10/2020

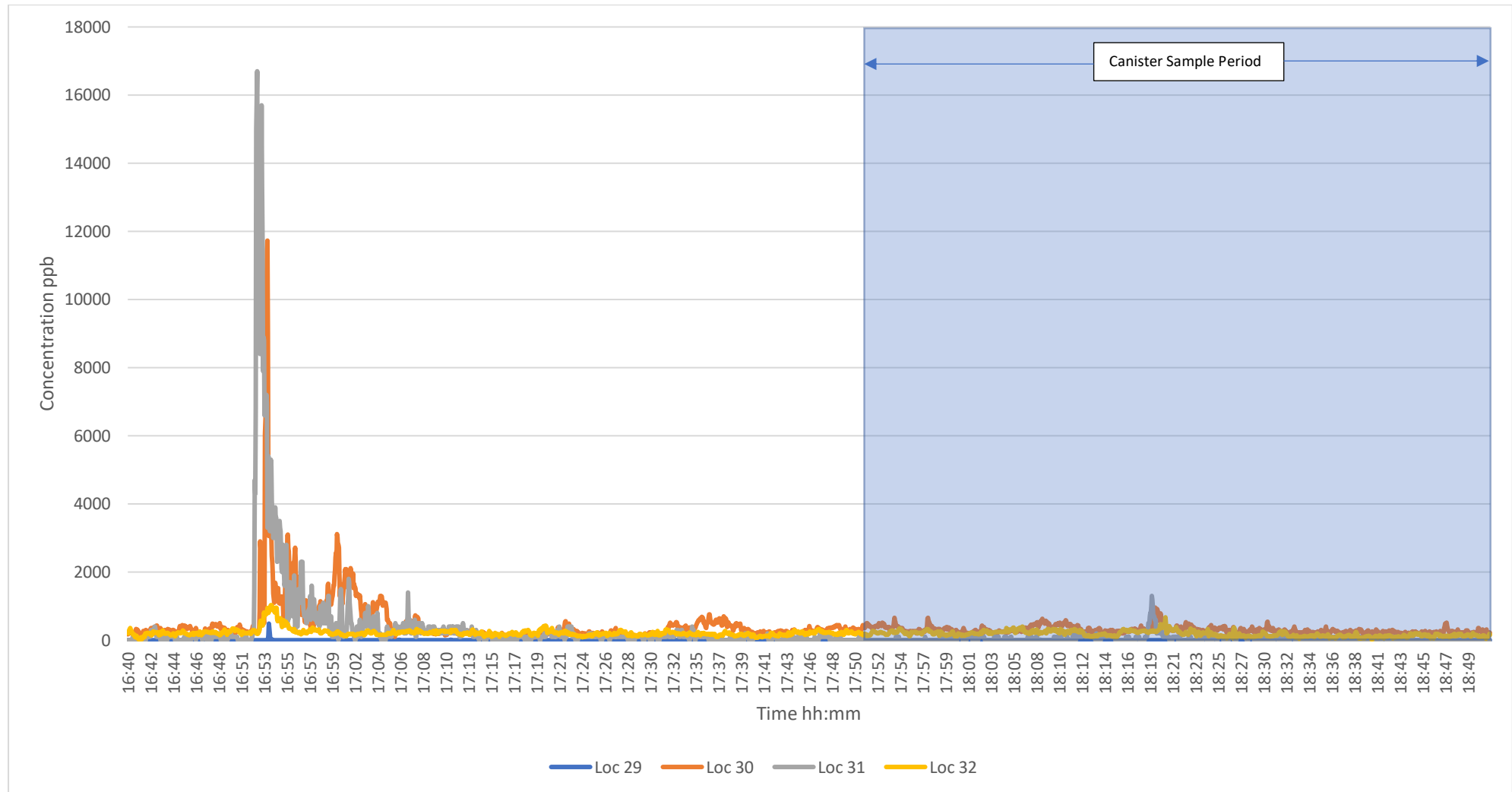


 Log stack venting (please note locations are only approximate)

 Sample locations

1-hour canister sampling and TVOC monitoring was undertaken at locations 29, 30, 31 and 32 from 1751-1851. 24-hour canister sampling was also undertaken at location 30 and 32. Sample periods for the 24 hour canisters ran for an extra 7-8 minutes over 24 hours. The average and peak TVOC measurements for the sampling period are shown below in Table 3 and Graphs 1-4. 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 6/10/2020



Notes: 17:51 start of canister sampling shown by the blue section. Tarp was lifted at 1650 and venting paused due to elevated levels at the boundary.

Please note: concentrations have not been corrected for methyl bromide and measurements will account for all VOC's including methyl bromide

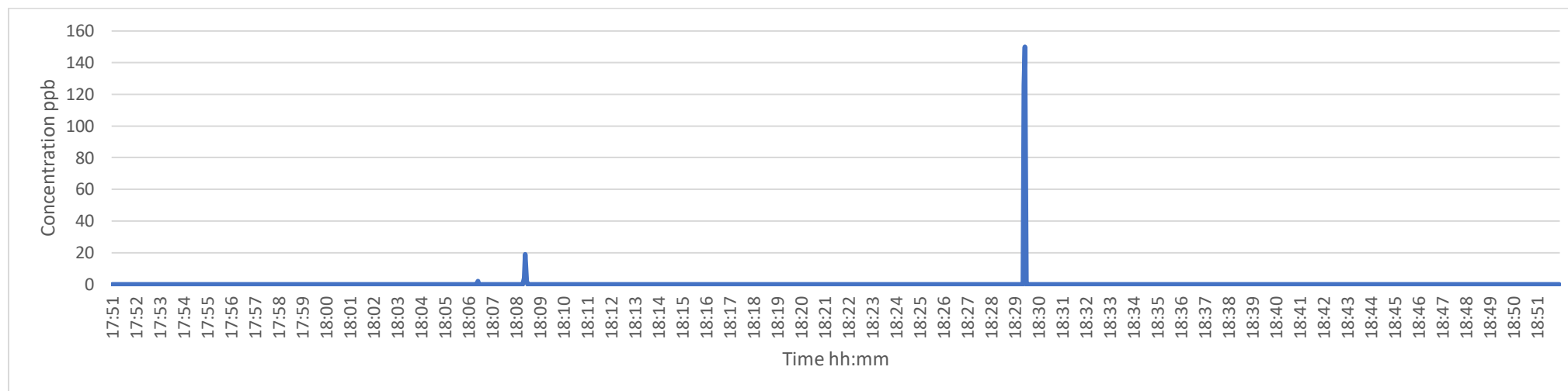
Table 3: Average and peak real-time TVOC measurements **over the 1hr canister sampling period (17:51-18:51)** on the 06/10/2020

Location (as shown on Map 1)	Average TVOC measured over sampling period (ppb)*	Peak TVOC measured over sampling period (ppb)*
29 Port – TCC Water Monitoring Station	<1 ⁺	208 ⁺
30 KiwiRail Boundary - South	301	954
31 KiwiRail - Middle	45	1300
32 KiwiRail Boundary - North	184	718

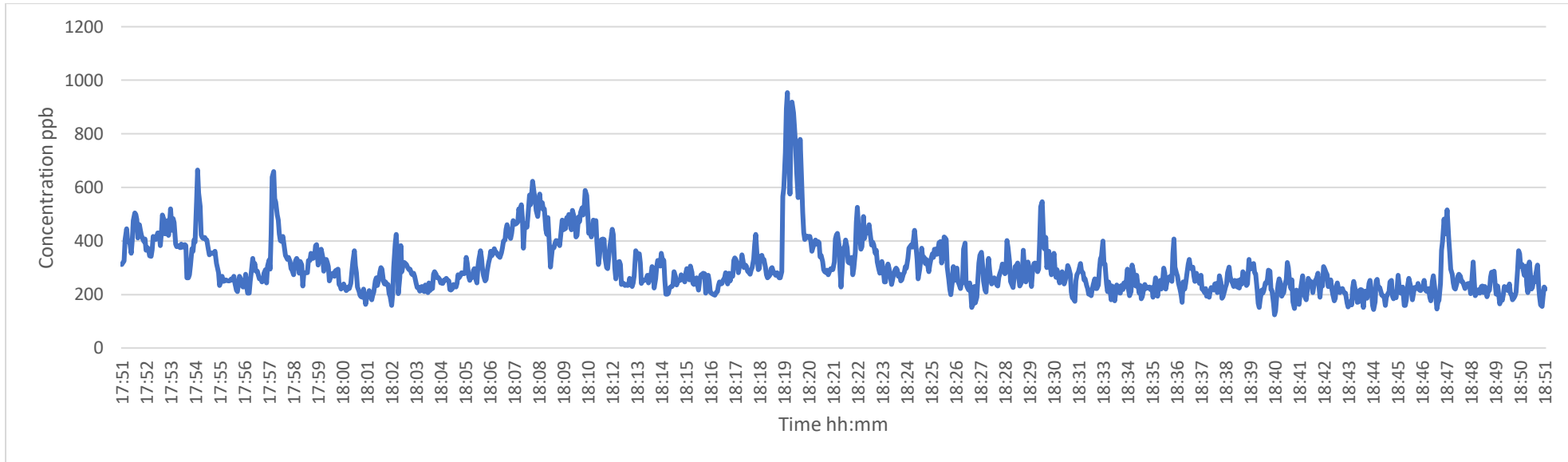
*Concentrations have not been corrected for methyl bromide

⁺TVOC concentrations may be higher than those reported due to a calibration error

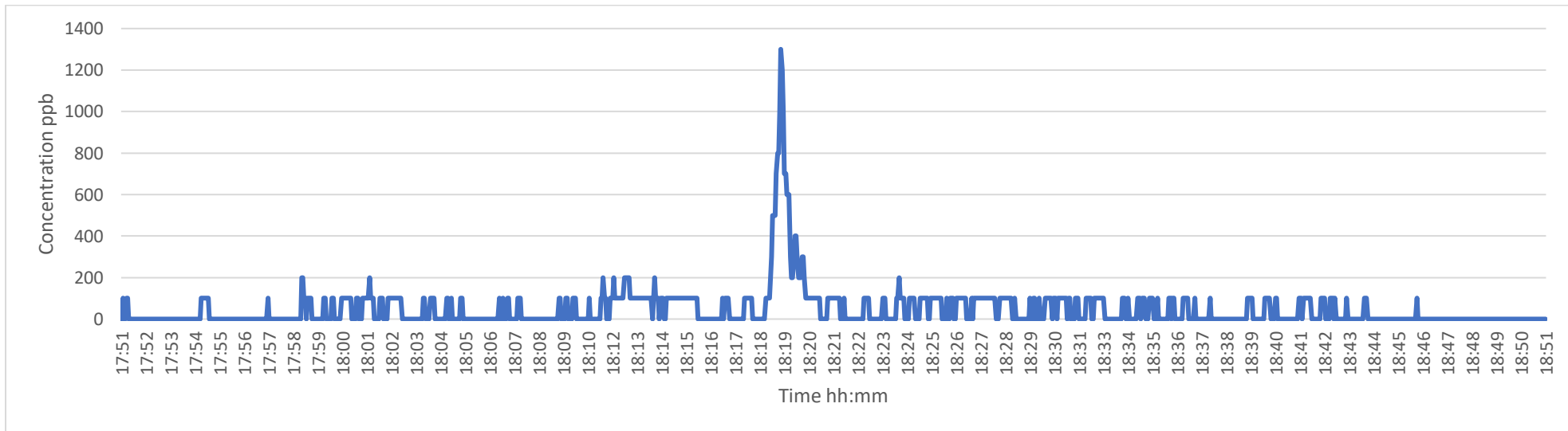
Graph 2: TVOC concentrations measured at Location 29



Graph 3: TVOC concentrations measured at Location 30



Graph 4: TVOC concentrations measured at Location 31



Graph 5: TVOC concentrations measured at Location 32

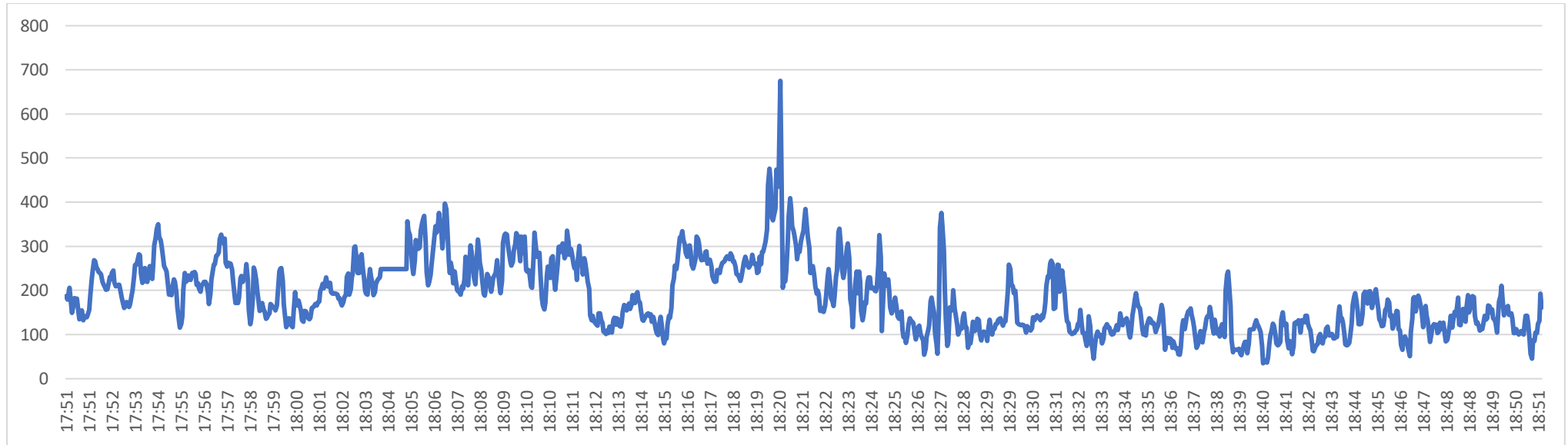


Table 4: 1-hour and 24-hour Canister Sampling Results 06/10/2020

Location (as shown on map above)		Sample Number	Sample length	Sample Time	Canister size	Methyl bromide Concentration (ppbv)
29	Port	19827-0610-29	1 hour	1751-1851	1.4	148 ± 23
30	KiwiRail Boundary (south)	19827-0610-30	1 hour	1751-1851	1.4	69 ± 11
30	KiwiRail Boundary (south) 24 hrs	19827-0610-30A	24 hours	1747-1755	6	7.4 ± 1.2
31	KiwiRail Boundary (middle)	19827-0610-31	1 hour	1751-1851	1.4	111 ± 17
32	KiwiRail Boundary (north)	19827-0610-32	1 hour	1751-1851	1.4	43.6 ± 6.7
32	KiwiRail Boundary (north) 24hrs	19827-0610-32A	24 hours	1750-1757	6	75 ± 12