



Monitoring Report

WMATA Bus Garage Monthly Report

May 2023

Noise Exceedances:

There continues to be numerous noise level exceedances at all hours of the day and all days of the week. Mic1 recorded the highest noise levels of any location which were highest after working hours and on weekends. In addition, Mic1 had 32% of its exceedances outside of working hours. Mic2 and Mic3 were similar to one another with 16-18% of the exceedances coming outside of working hours. Mic4 recorded only 7% of its exceedances during nights and weekends most likely due to its distance from the city streets. Mic5 had the fewest number of exceedances, however its maximum level at 113 dBA is one of the highest and nearly 57% of the exceedances came from outside working hours.

Vibration Exceedances:

During the monitoring period there were five vibration exceedance events. Please see the date, time, and magnitude outlined below. Note the VM1 and VM 2 are set to flag an exceedance at a value on 0.2 inch per second (IPS) to alert for potential damage at the historic façade. This value is 1/10 of the value recognized for potential damage to sheetrock/plaster for adjacent properties and all exceedance readings are significantly below the 2 IPS threshold.

VM Sensor 1

VM1 – 5/12 1125h. Trigger by single impact vibration.

VM1 – 5/23 1315h. Few single impacts near sensor.

VM1 – 5/31 1103h. Triggered by physical vibration.

VM1 – 5/31 1104h. Triggered by physical vibration.

VM1 – 5/31 1134h. Triggered by physical vibration.

VM Sensor 2

VM2 – 5/30 0024h. Invalid. Not consistent with physical motion. Electrical interference.

The VM2 vibration and noise monitor was temporarily removed for localized excavation, which explains the gap in data from May 8th through 12th.

Air Quality/Dust Monitoring Exceedances:

Only the following brief/momentary dust emission exceedances were recorded. Please note that DM3 experienced power failure from May 2nd through 22nd. The battery was exchanged, and the solar panel angle was reset on May 22nd and an offline alarm was enabled to send alerts if there are any power failures in the future to prevent extended periods of data loss.

DM Sensor 1

DM1 – PM10 5/25 0922h-0937h

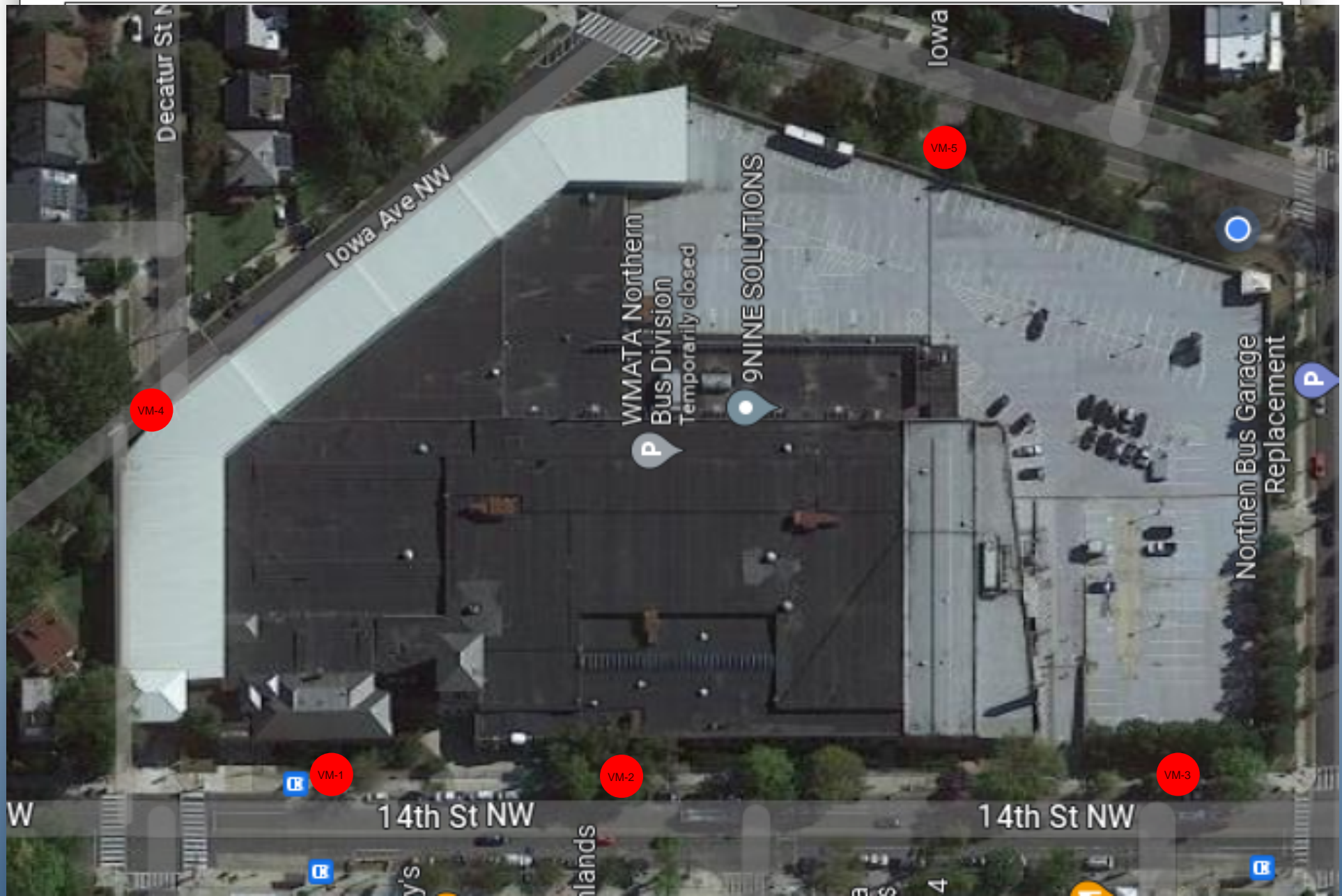
DM Sensor 2

DM2 – PM2.5 5/19 1056h

DM Sensor 2

DM3 – PM2.5 and PM10 5/31 1605h-1635h

Please note that construction activities are generally concluded by 16:00 every weekday.



Air Monitor



These observations were made from the following summary tables.

VM1-MIC		
	Exceedance	Percentage
Work hours	3160	67.28%
After hours	872	18.57%
Weekends	665	14.16%
Total	4697	

	Work hours	After hours	Weekends
Lmax	112.5	114.7	113.1
Lmin	41.8	38	37.7
L10	110	113	106
L90	91	90	87
Leq	105.4	106.4	101.3

VM2-MIC		
	Exceedance	Percentage
Work hours	4762	83.90%
After hours	574	10.11%
Weekends	340	5.99%
Total	5676	

	Work hours	After hours	Weekends
Lmax	107.8	110.3	107.1
Lmin	43.7	41.3	41.4
L10	103	106	103
L90	89	91	85
Leq	99.2	100.4	97.3

VM3-MIC		
	Exceedance	Percentage
Work hours	2617	81.63%
After hours	302	9.42%
Weekends	287	8.95%
Total	3206	

	Work hours	After hours	Weekends
Lmax	105.6	104.1	109.6
Lmin	47.4	41	41.8
L10	100	99	104
L90	86	84	89
Leq	94	93.5	100.6

VM4-MIC		
	Exceedance	Percentage
Work hours	937	93.05%
After hours	50	4.97%
Weekends	20	1.99%
Total	1007	

	Work hours	After hours	Weekends
Lmax	109.7	104.3	99.6
Lmin	36	33.6	36.1
L10	107	94	97
L90	102	82	74
Leq	104.7	90.5	91.5

VM5-MIC		
	Exceedance	Percentage
Work hours	272	43.38%
After hours	201	32.06%
Weekends	154	24.56%
Total	627	

	Work hours	After hours	Weekends
Lmax	109.7	113	110.4
Lmin	38.4	36.4	36
L10	106	106	107
L90	87	86	90
Leq	100.3	101	101.4

Air Quality Exceedances:

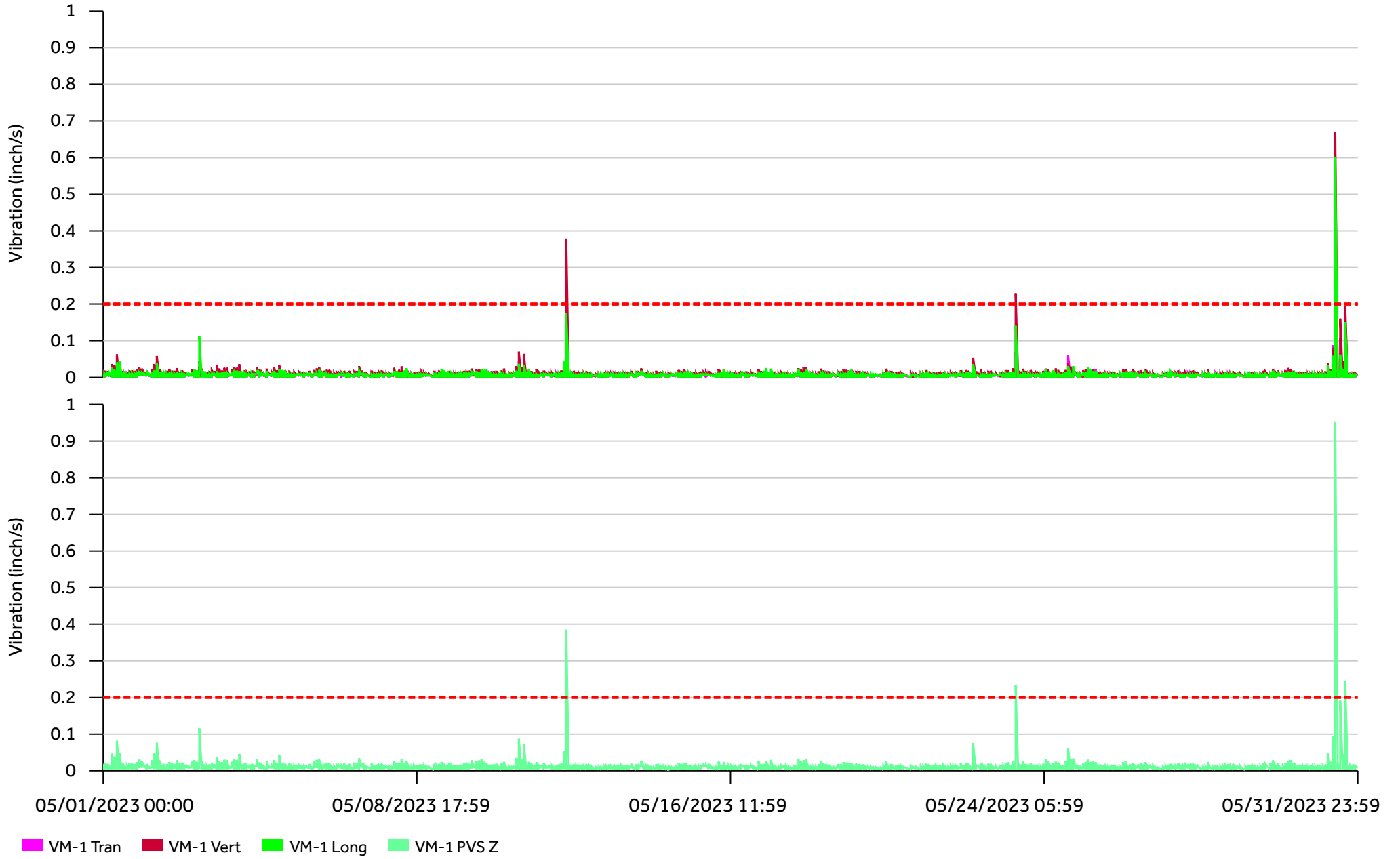
Only the following brief/momentary dust emission exceedances were recorded.

DM1: PM10 5/25 0922h-0937h

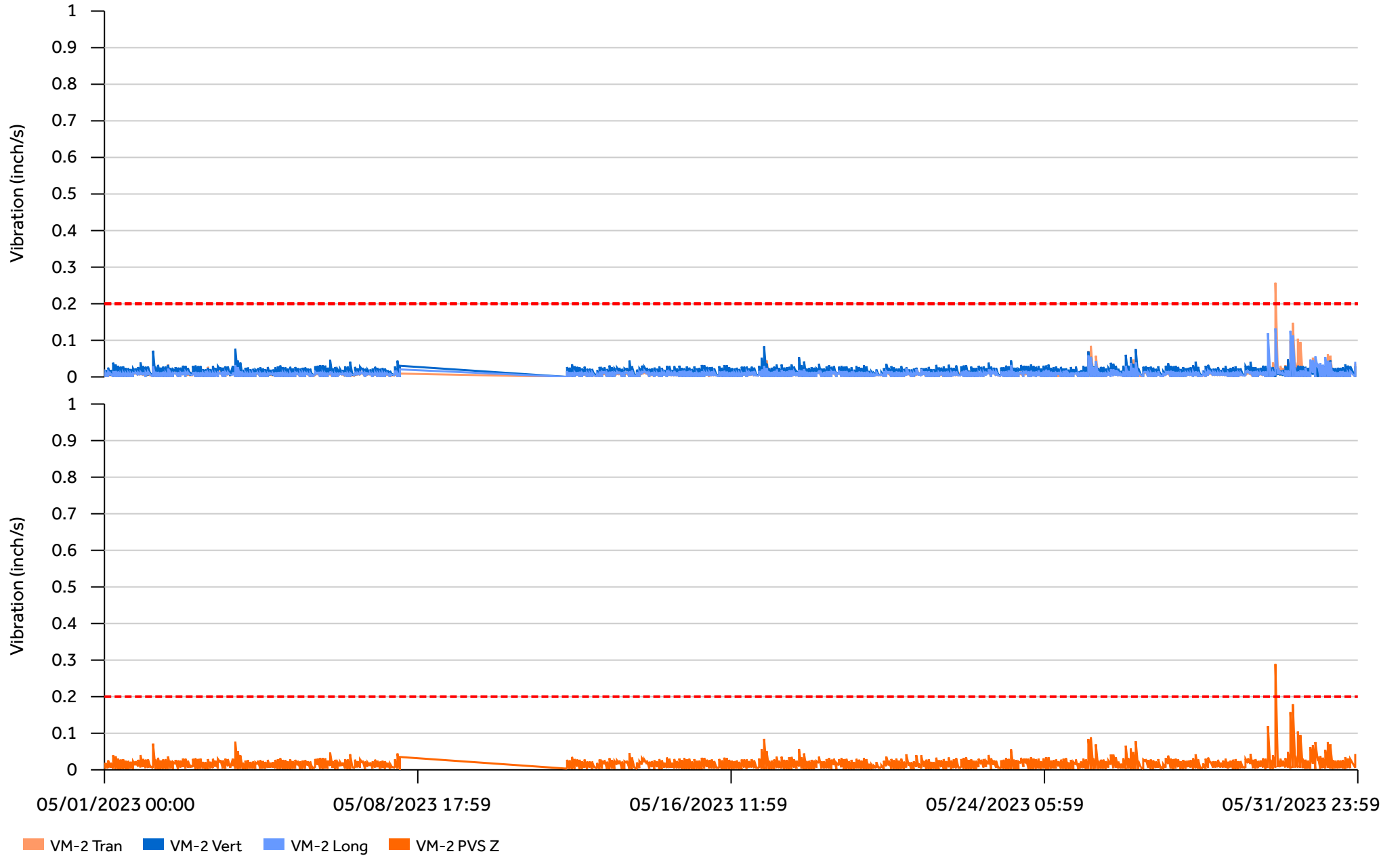
DM2: PM2.5 5/19 1056h

DM3: PM2.5 and PM10 5/31 1605h-1635h

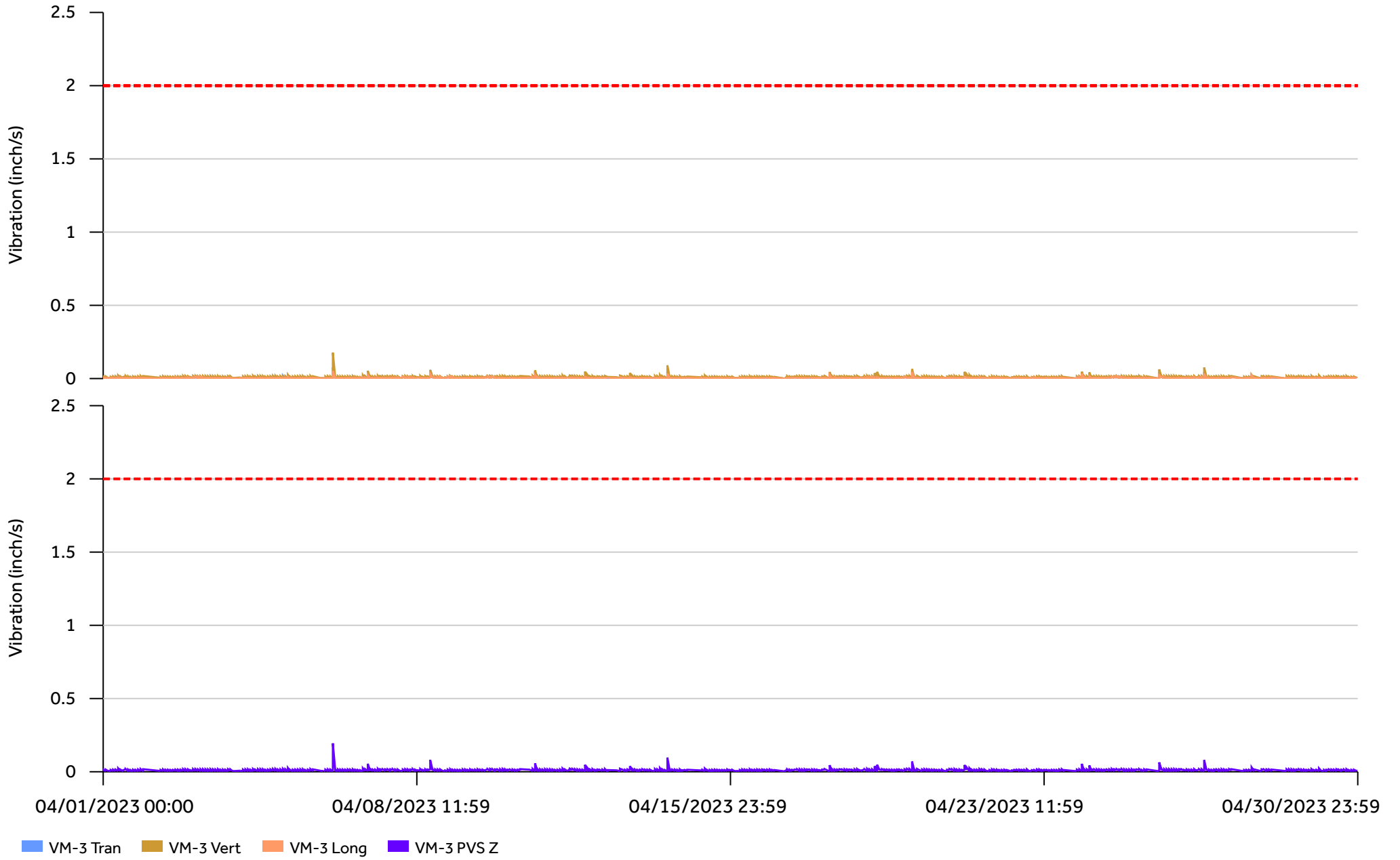
VM-1- Vibration Monitor



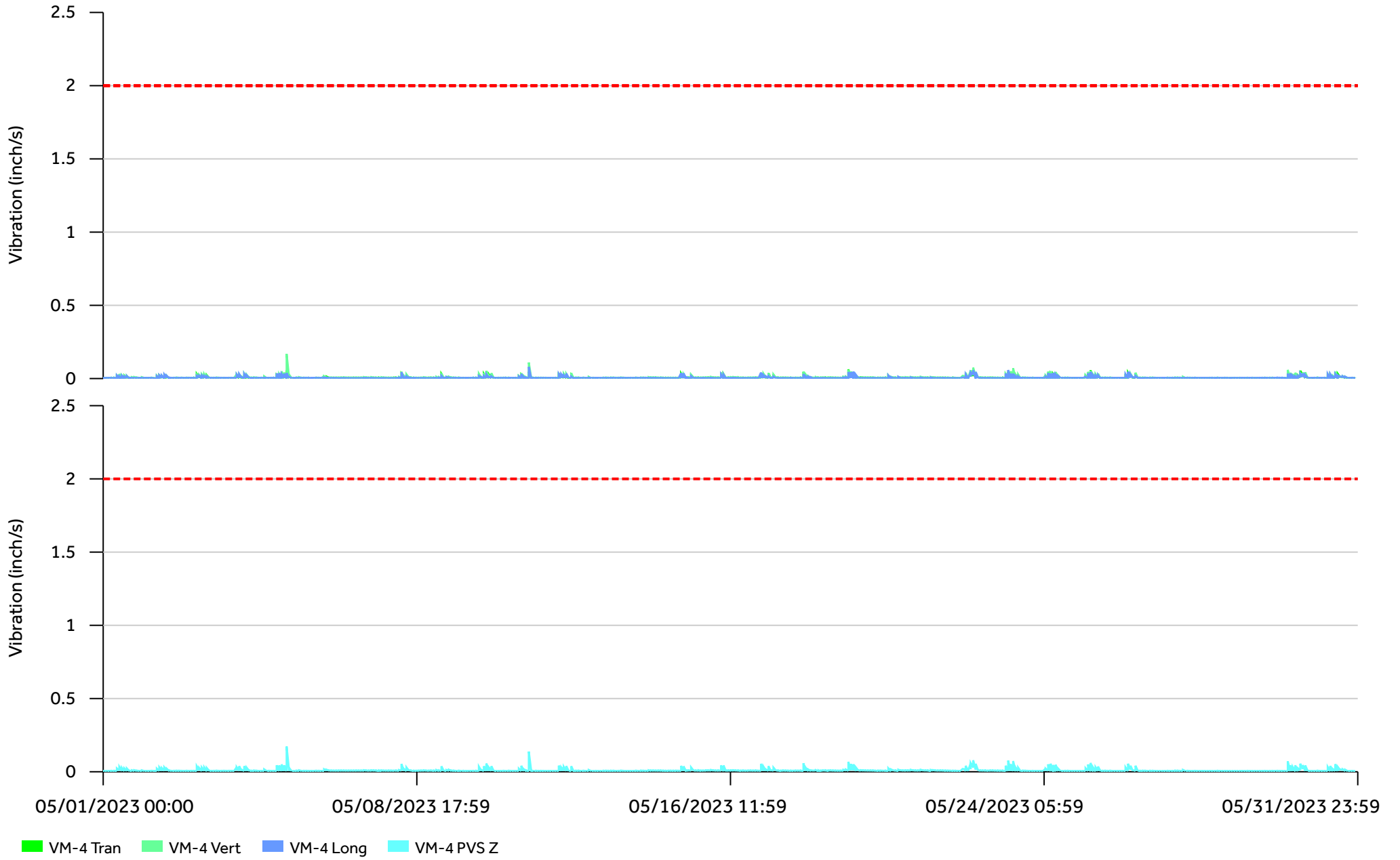
VM-2- Vibration Monitor



VM-3- Vibration Monitor



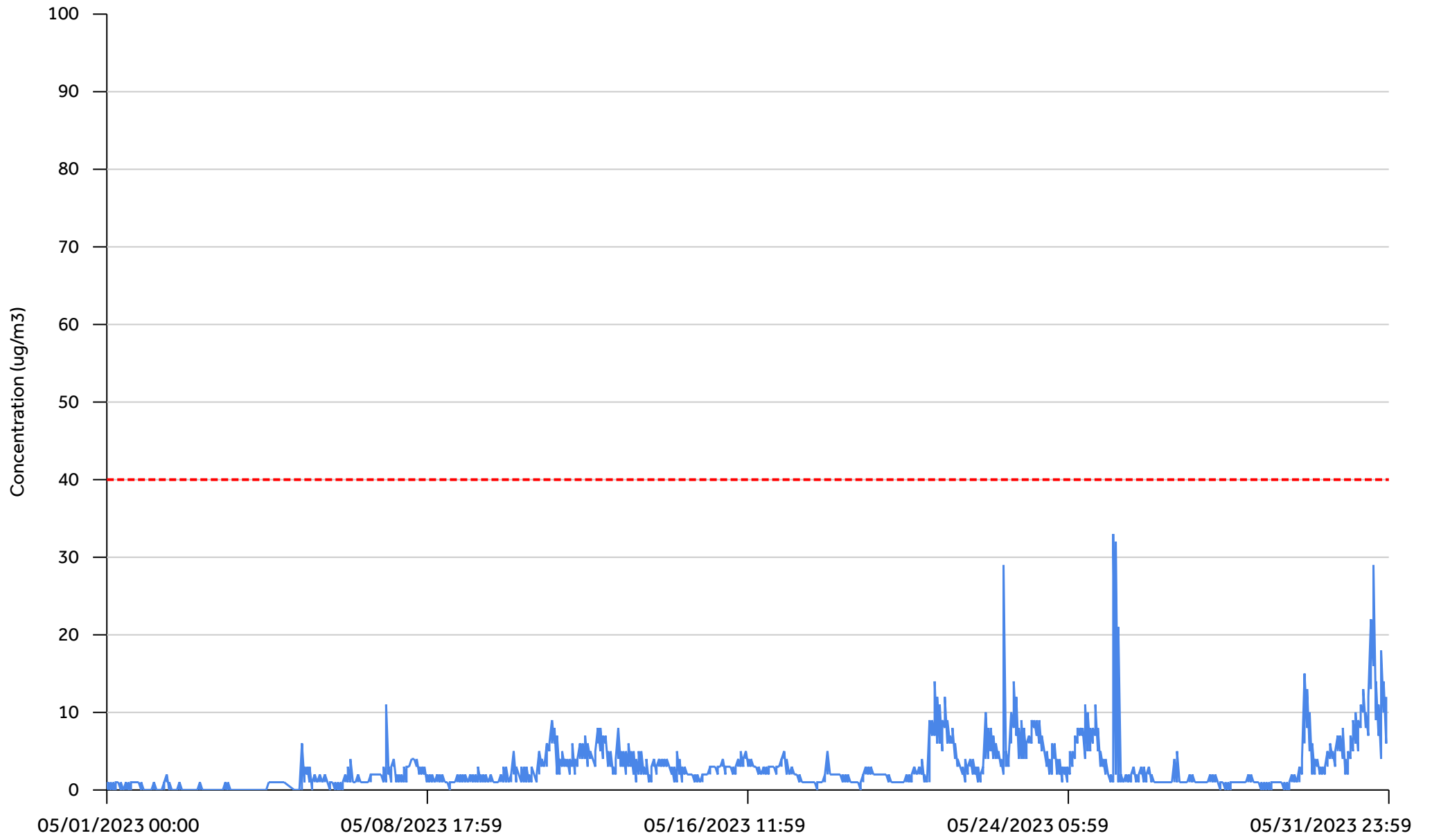
VM-4- Vibration Monitor



VM-5- Vibration Monitor

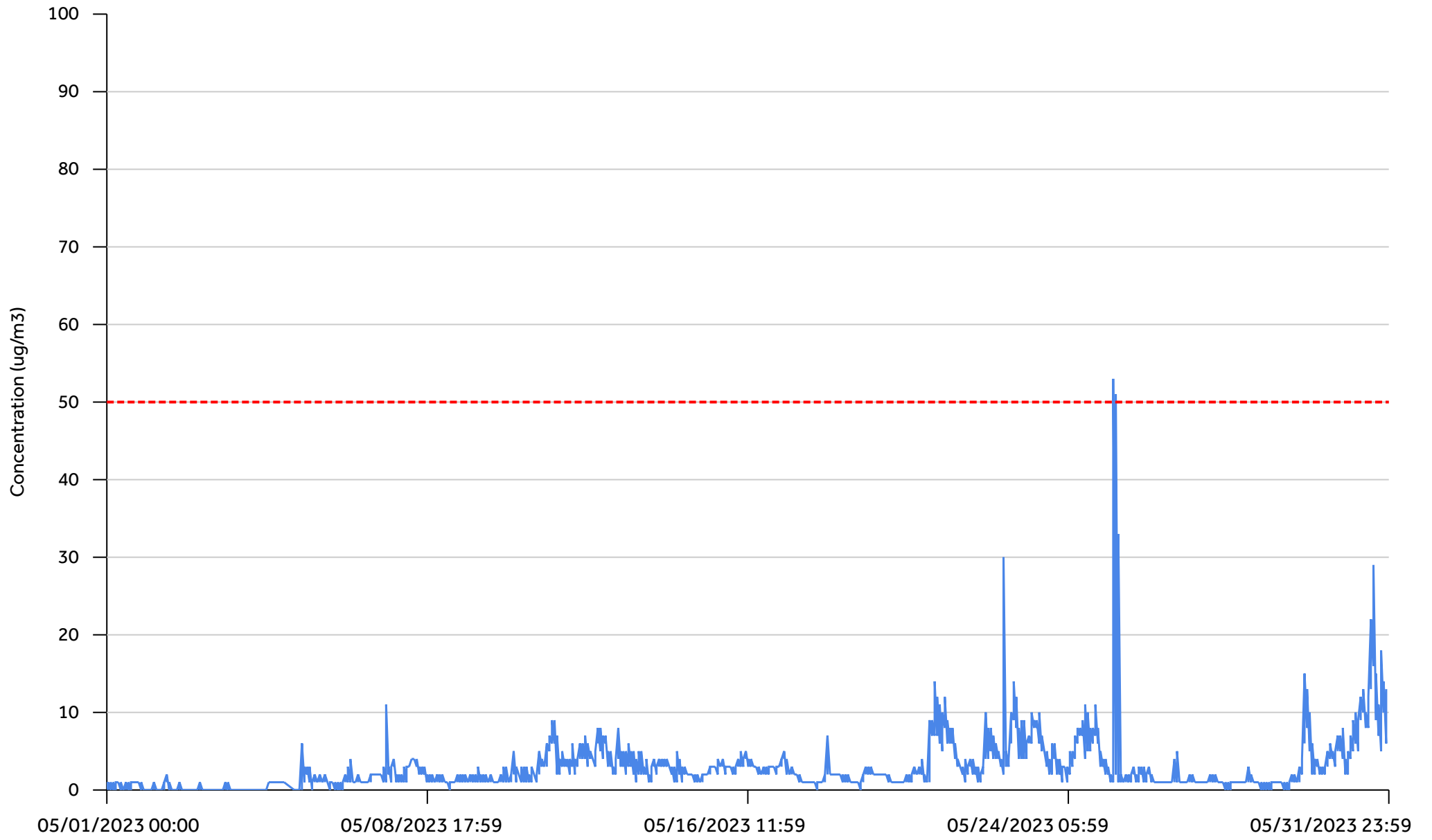


DM1-PM2.5



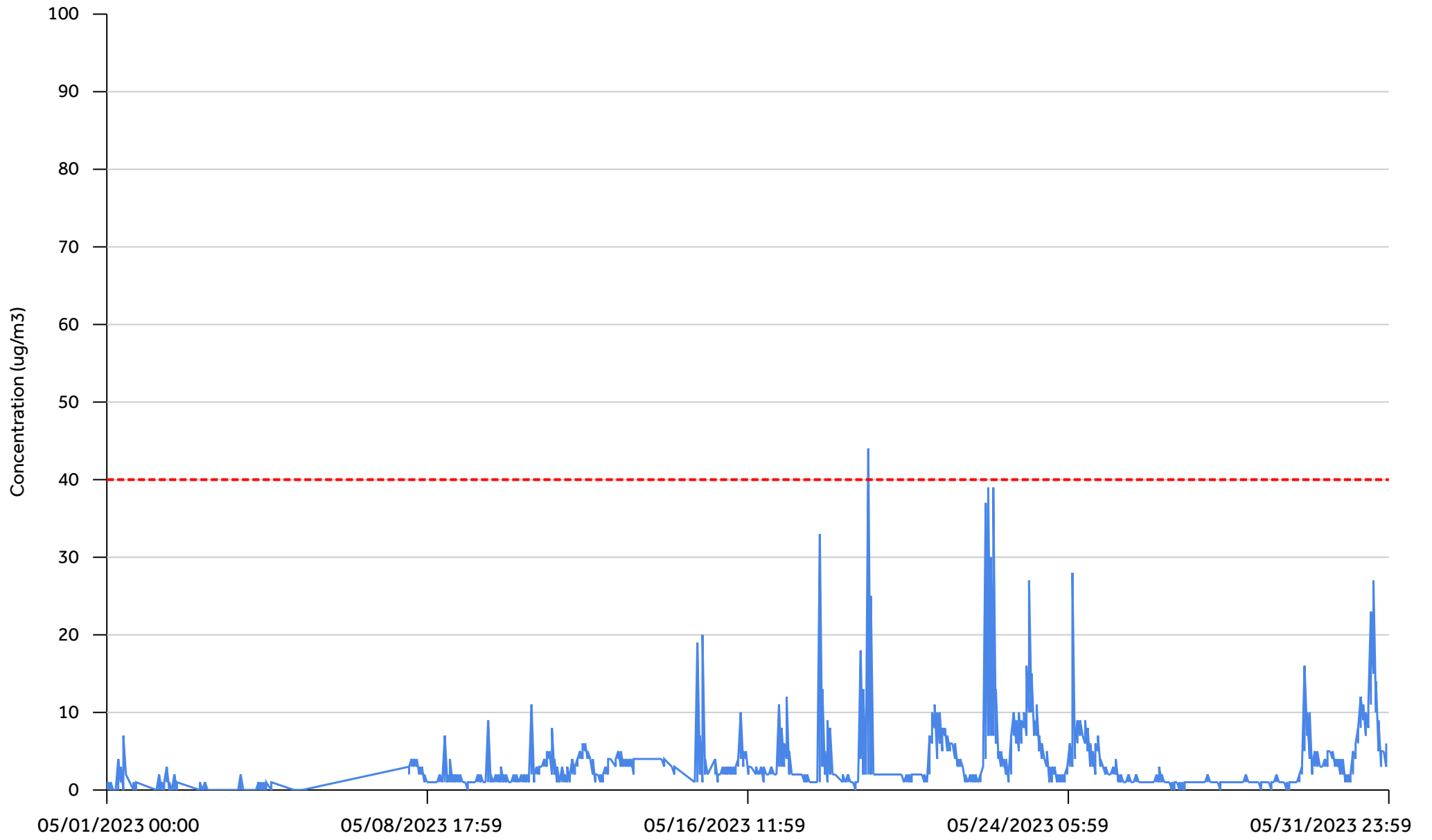
DM1_PM2.5 Z

DM1 - PM10



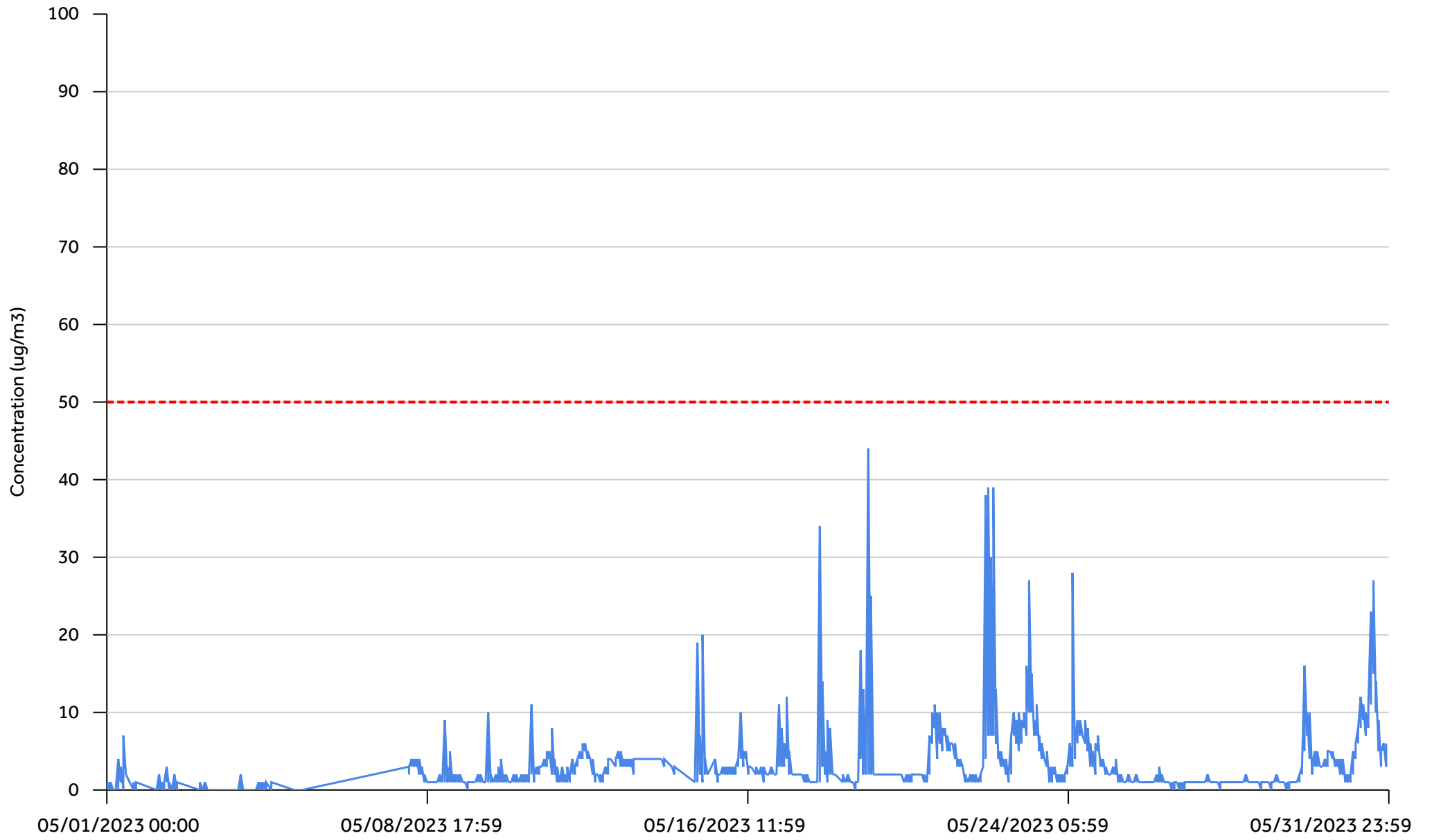
DM1_PM10 Z

DM2-PM2.5



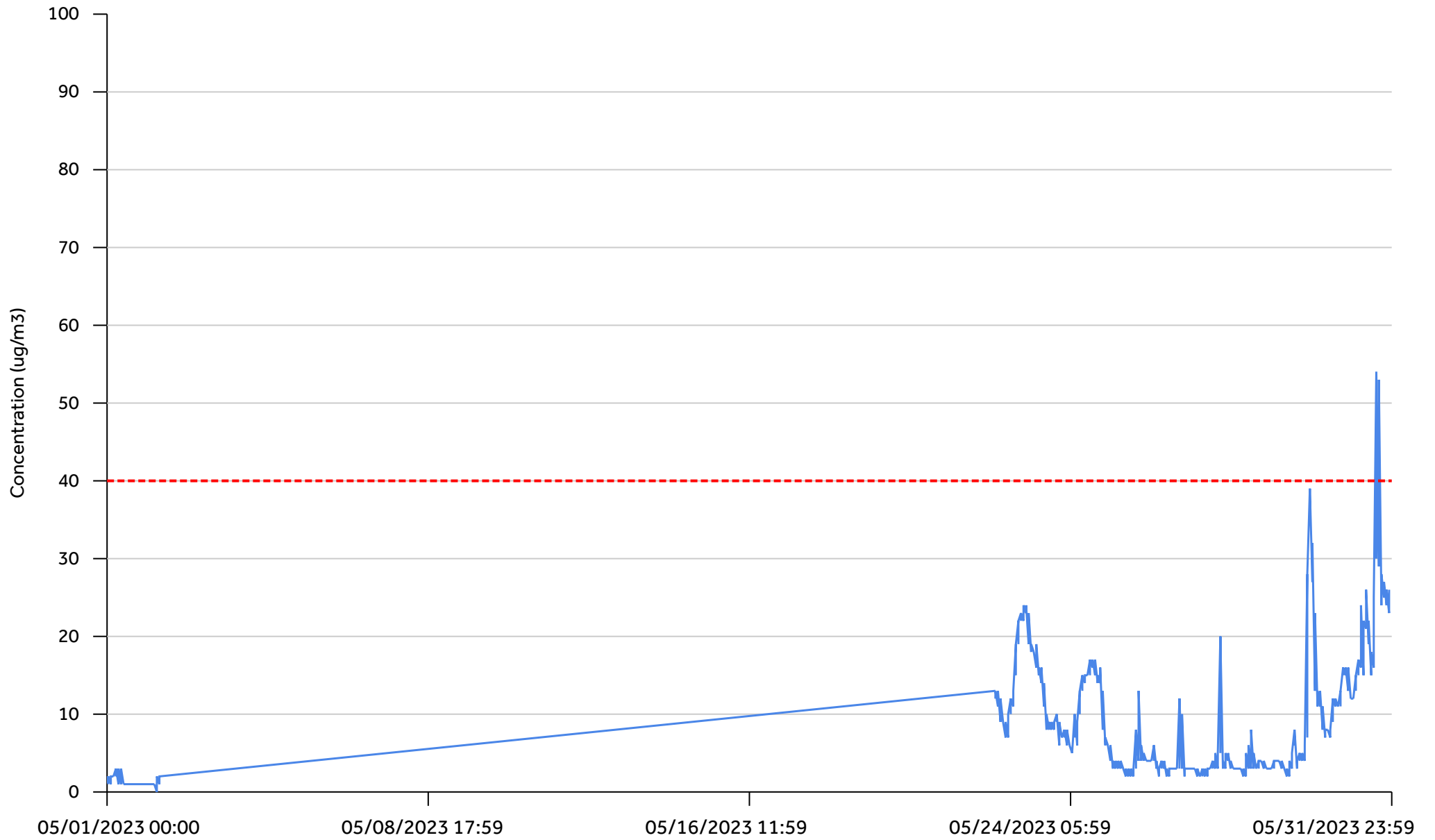
DM2_PM2.5 Z

DM2-PM10



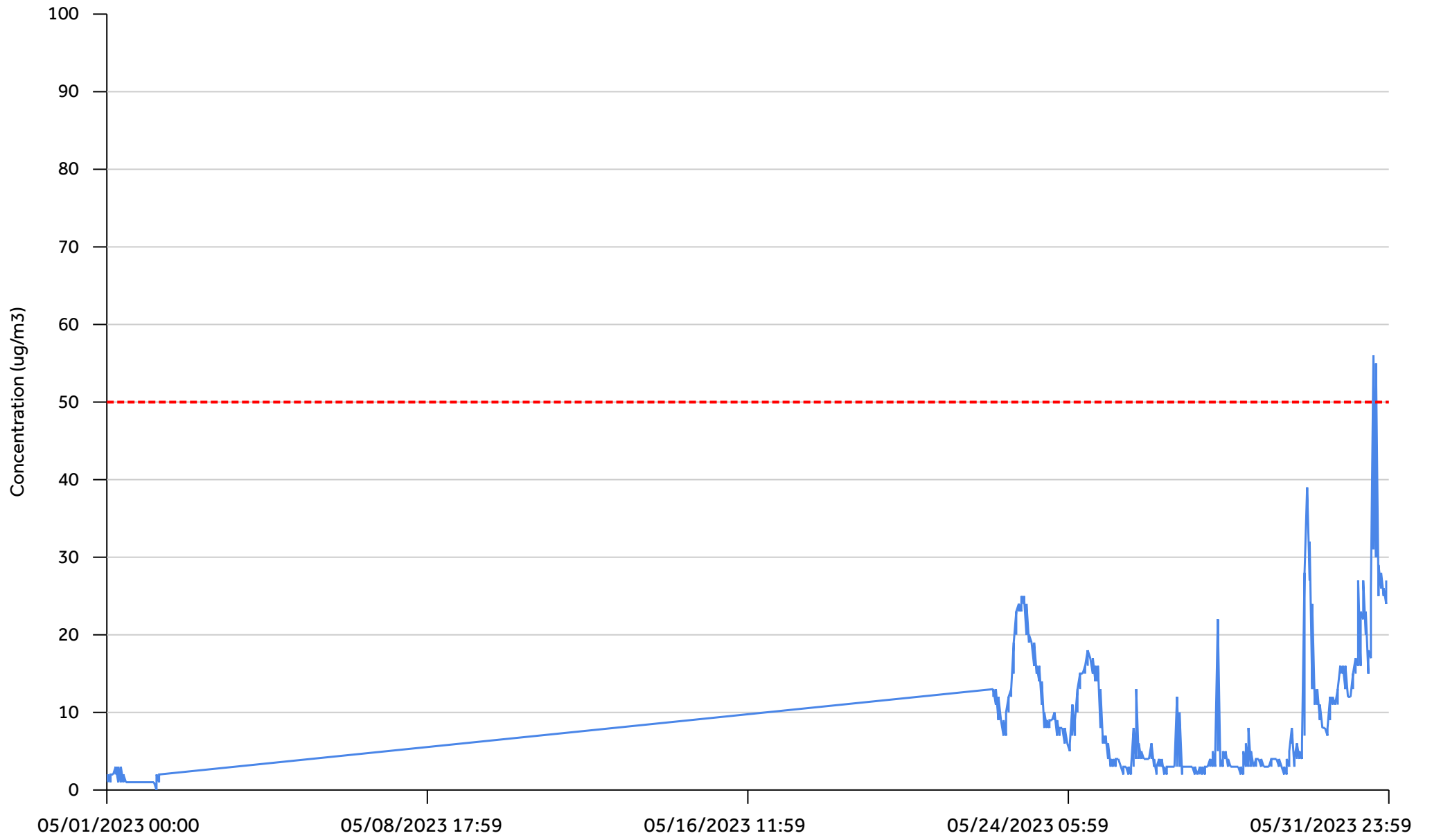
DM2_PM10 Z

DM3-PM2.5



DM3_PM2.5 Z

DM3-PM10



DM3_PM10 Z