

# Northern Bus Garage

## Noise, Vibration, and Dust Monitoring Report (February 2026)

Noise, Vibration, and Dust levels were monitored as part of the reconstruction of Northern Bus Garage, 4615 14<sup>th</sup> Street, NW, Washington, DC, for the month of February 2026.

The following memorandum identifies the monitoring points and instruments, presents the data, and provides a brief analysis of the results per monthly monitoring report attached by Geo Instruments for Clark Construction. The report is organized by medium: noise, vibration, and dust. Figures and graphs are attached. The red dashed line on each of the graphs represents the monitoring thresholds, which are summarized below for each instrument.

### Noise Monitoring

Five noise monitors are positioned around the perimeter of the project site. (See Figure 1) Under DC regulations, the regulatory standard is 80 dBA, measured 25 ft from the property line (20 DCMR 2802.1). Because the noise monitoring devices are placed on the property line (rather than a 25 ft offset), the monitoring threshold for site activities is adjusted to 85 dBA (assuming the noise level will dissipate). Noise levels and vibration levels were measured automatically with Micromate and Geophone Instrument.

Numerous noise level exceedances at all hours of the day and all days of the week. Mic1, Mic3, and Mic5 recorded over one-third of their exceedances out of working hours. Mic3 had its loudest exceedance outside of working hours.

Please see Table 1 (The "Work Hours" category includes all weekend shifts and evening shifts that were worked during the month).

### Vibration Monitoring

Five vibration monitors are positioned around the perimeter of the project site (See Figure 1). Vibration thresholds are based on the WMATA Design Criteria. Monitors VM-1 and VM-2 are set at a lower vibration threshold due to their proximity to the historic façade, which is more sensitive to any movement. Noise levels and vibration levels were measured automatically with Micromate and Geophone Instrument.

**Table 2**

<b>Instrument Type</b>	<b>Monitoring Threshold</b>
Vibration Monitor (VM-1)	0.2 in/sec
Vibration Monitor (VM-2)	0.2 in/sec
Vibration Monitor (VM-3)	2.0 in/sec
Vibration Monitor (VM-4)	2.0 in/sec
Vibration Monitor (VM-5)	2.0 in/sec

Graphs showing monitoring results are presented in Graphs 1 to 5.

Vibration exceedances for the month of February are listed below.

- VM2 – Exceedance with a reading of 0.21 in/sec on February 26 at 15:43.
- VM2 – Exceedance with a reading of 0.35 in/sec on February 27 at 09:46.

### Dust Monitoring Threshold Values and Exceedances:

Three dust monitors are positioned at the project site. (See Figure 2) EPA regulatory thresholds are based on a 24-hour monitoring period; the project has adopted thresholds to monitor site levels and provide an indication of when EPA standards might be exceeded. (See Table 3) Dust measurements were monitored using Aeroqual Dust Sentry Pro.

**Table 3**

<b>Dust Monitoring Measurement</b>	<b>Monitoring Threshold</b>
Particulates (PM2.5)	40 µg/m <sup>3</sup>
Particulates (PM10)	50 µg/m <sup>3</sup>

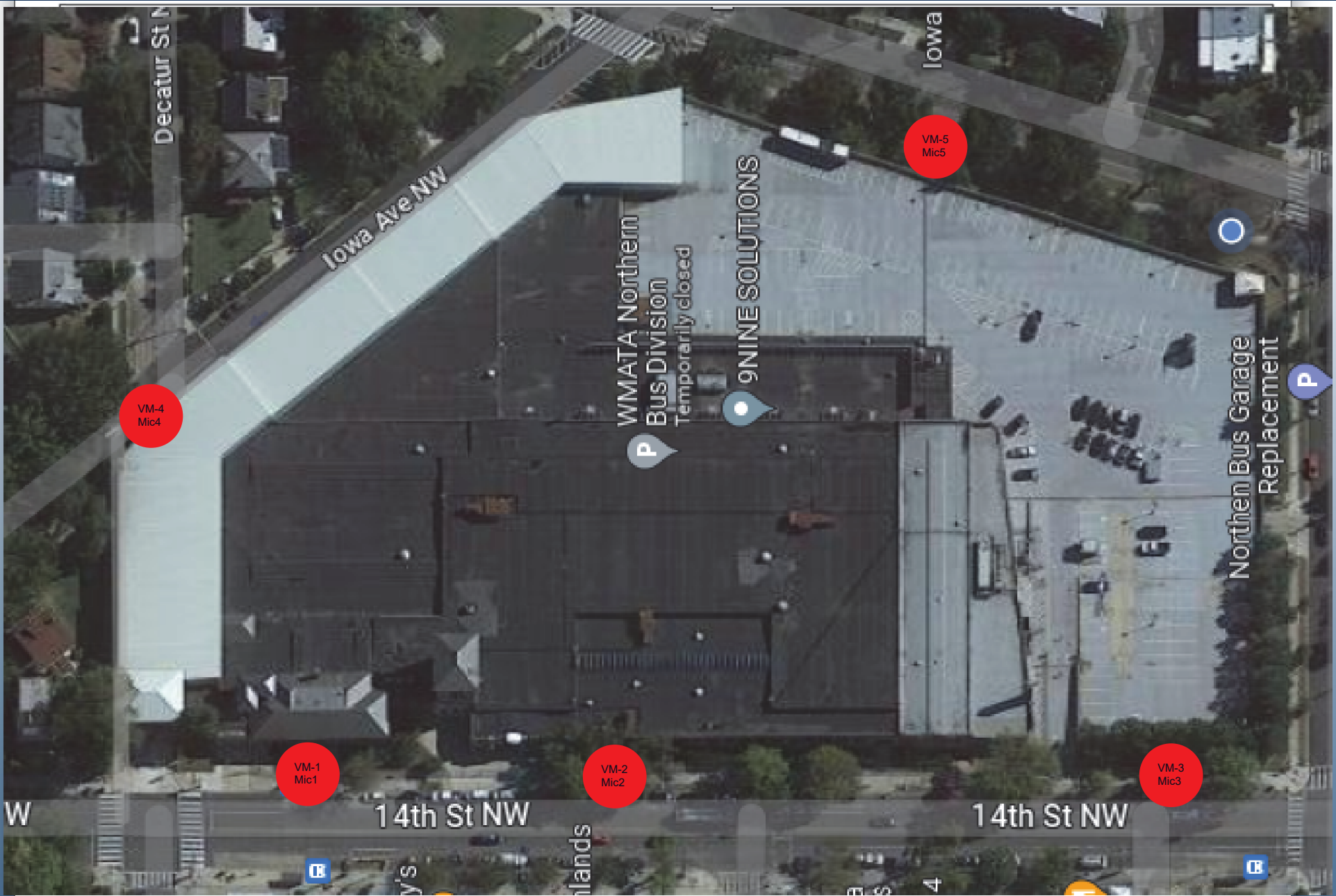
As reported last month, DM2 stopped transmitting values on January 14. The field crew made site visits on at least three occasions to troubleshoot the system. Ultimately the equipment was replaced, and data began flowing again on February 26.

Graphs showing monitoring results are presented in Graphs 6 to 11.

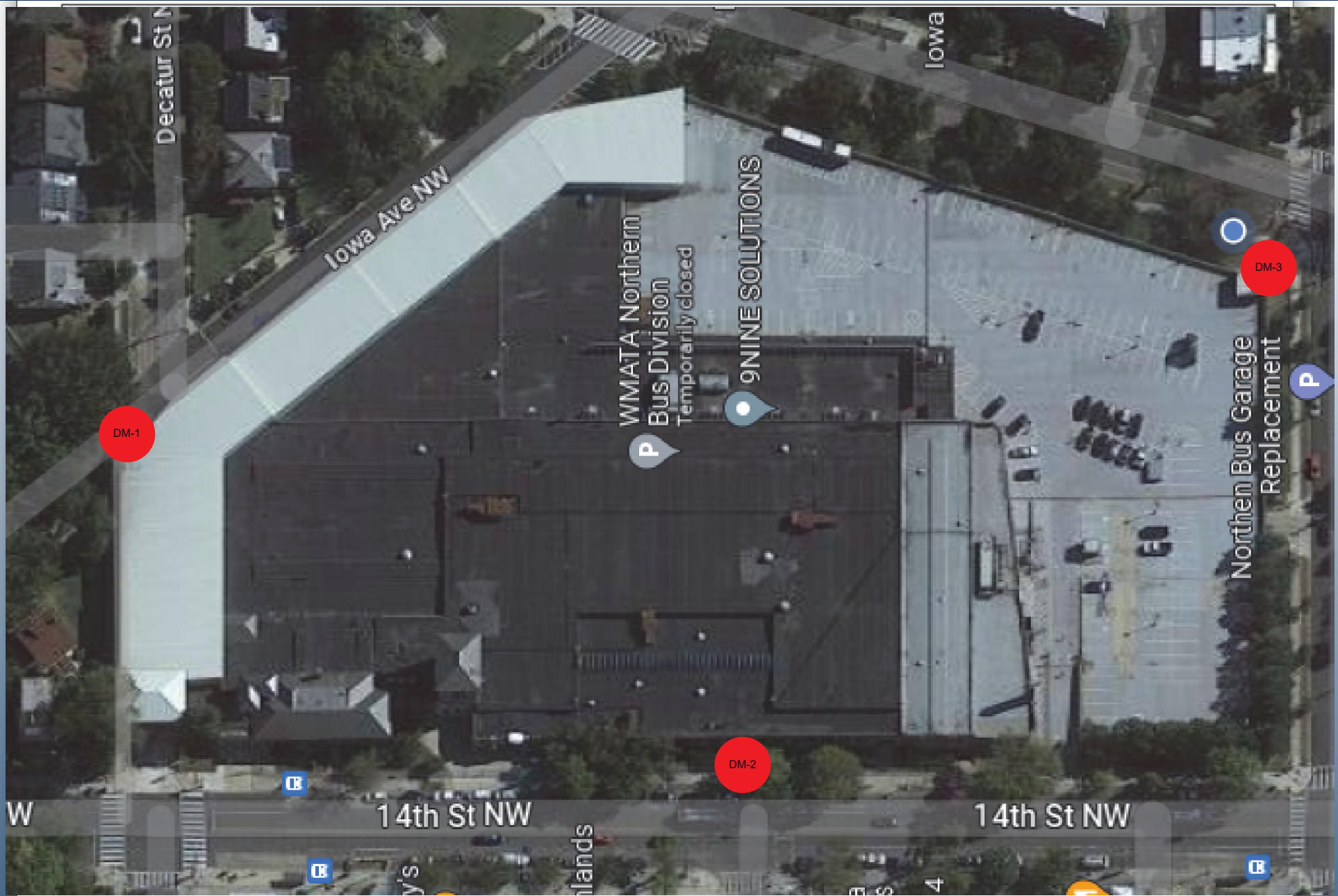
Two air quality exceedances occurred during the month of February 2026. Details of these air quality exceedances can be found below.

- DM1 – Matched the PM2.5 limit with a reading of 40  $\mu\text{g}/\text{m}^3$  on February 11 at 07:54.
- DM1 – Exceedance of the PM10 limit with a reading of 51  $\mu\text{g}/\text{m}^3$  on February 28 at 09:39.

# Figure 1: Vibration and Noise Monitor Location Plan



# Figure 2: Dust Monitor Location Plan



# Table 1: Noise Summaries

VM1-MIC		
	Exceedance	Percentage
Work hours	577	60.74%
After hours	199	20.95%
Weekends	174	18.32%
Total	950	100%

VM1-MIC			
	Work hours	After hours	Weekends
Lmax (dBA)	112.1	110.3	109.3
Lmin (dBA)	76.3	63.2	63.2
L10 (dBA)	94	76	75
L90 (dBA)	78	64	64
Leq (dBA)	90.8	83.4	78.4

VM2-MIC		
	Exceedance	Percentage
Work hours	375	72.53%
After hours	66	12.77%
Weekends	76	14.70%
Total	517	100%

VM2-MIC			
	Work hours	After hours	Weekends
Lmax (dBA)	113.7	105.3	107.6
Lmin (dBA)	77.1	47.9	67.3
L10 (dBA)	90	72	73
L90 (dBA)	79	51	69
Leq (dBA)	83.4	77.5	75.7

VM3-MIC		
	Exceedance	Percentage
Work hours	537	56.29%
After hours	215	22.54%
Weekends	202	21.17%
Total	954	100%

VM3-MIC			
	Work hours	After hours	Weekends
Lmax (dBA)	112.3	114.2	111.4
Lmin (dBA)	73.3	59.9	69.9
L10 (dBA)	91	74	80
L90 (dBA)	76	70	73
Leq (dBA)	84.7	84.4	79.5

VM4-MIC		
	Exceedance	Percentage
Work hours	59	73.75%
After hours	8	10.00%
Weekends	13	16.25%
Total	80	100%

VM4-MIC			
	Work hours	After hours	Weekends
Lmax (dBA)	99.6	87.5	94.6
Lmin (dBA)	66.9	40.3	39.8
L10 (dBA)	78	55	57
L90 (dBA)	69	44	43
Leq (dBA)	73.8	62.2	62.6

VM5-MIC		
	Exceedance	Percentage
Work hours	113	54.07%
After hours	38	18.18%
Weekends	58	27.75%
Total	209	100%

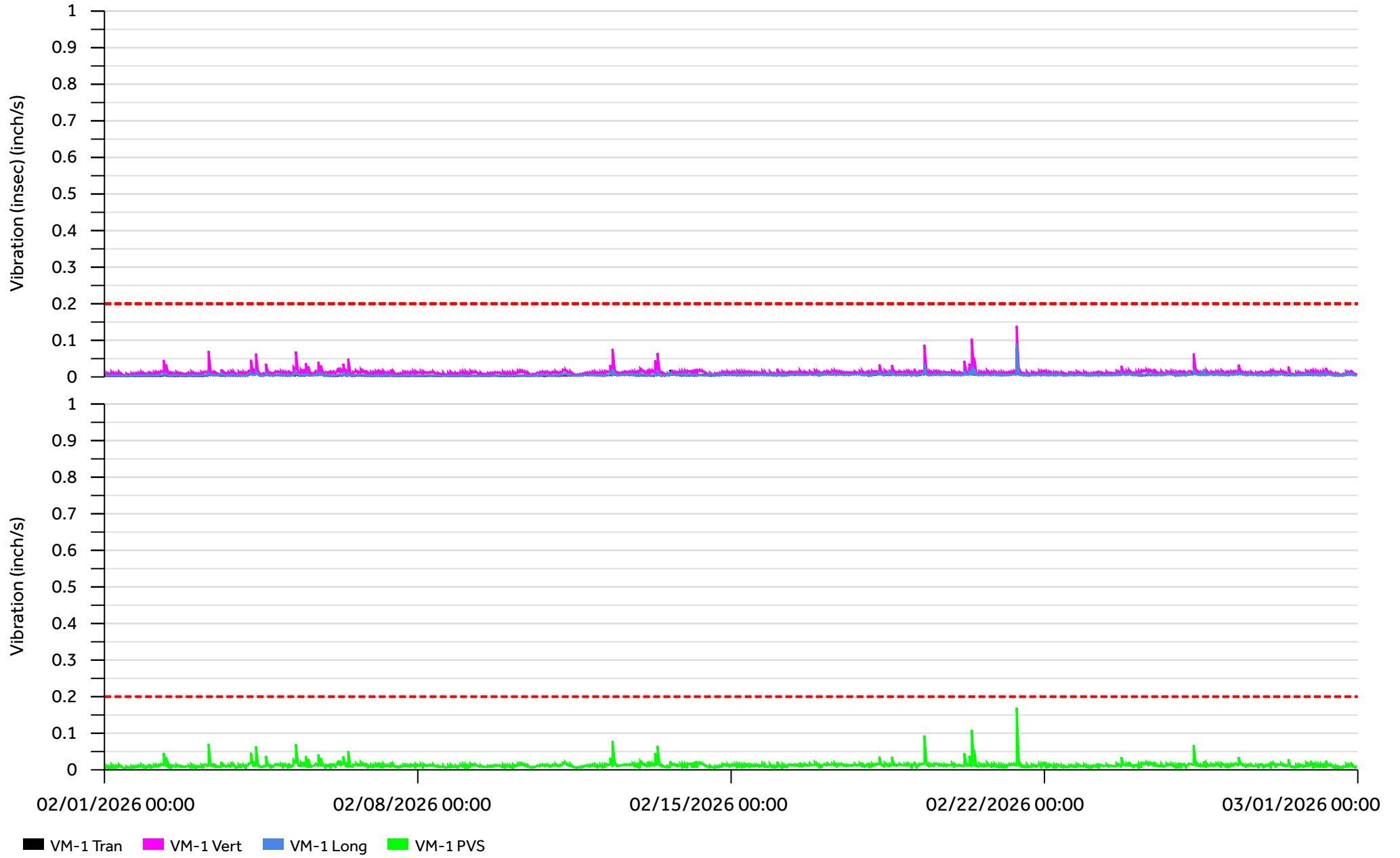
VM5-MIC			
	Work hours	After hours	Weekends
Lmax (dBA)	110.7	105	109.3
Lmin (dBA)	51.6	47.9	49.1
L10 (dBA)	74	72	73
L90 (dBA)	58	53	54
Leq (dBA)	78.3	73.8	78.5

Summary tables contain values for working hours, after hours, and weekend time periods:

- Lmax: Highest Maximum Noise Level recorded for the month, in dBA.
- Lmin: Highest Minimum Noise Level recorded for the month, in dBA.
- L10: Highest noise level that was exceeded 10% of the time of all recording periods this month, in dBA.
- L90: Highest noise level that was exceeded 90% of the time of all recording periods this month, in dBA.
- Leq: Highest Equivalent Continuous Sound Level, or 'average' of all recording periods this month, in dBA.

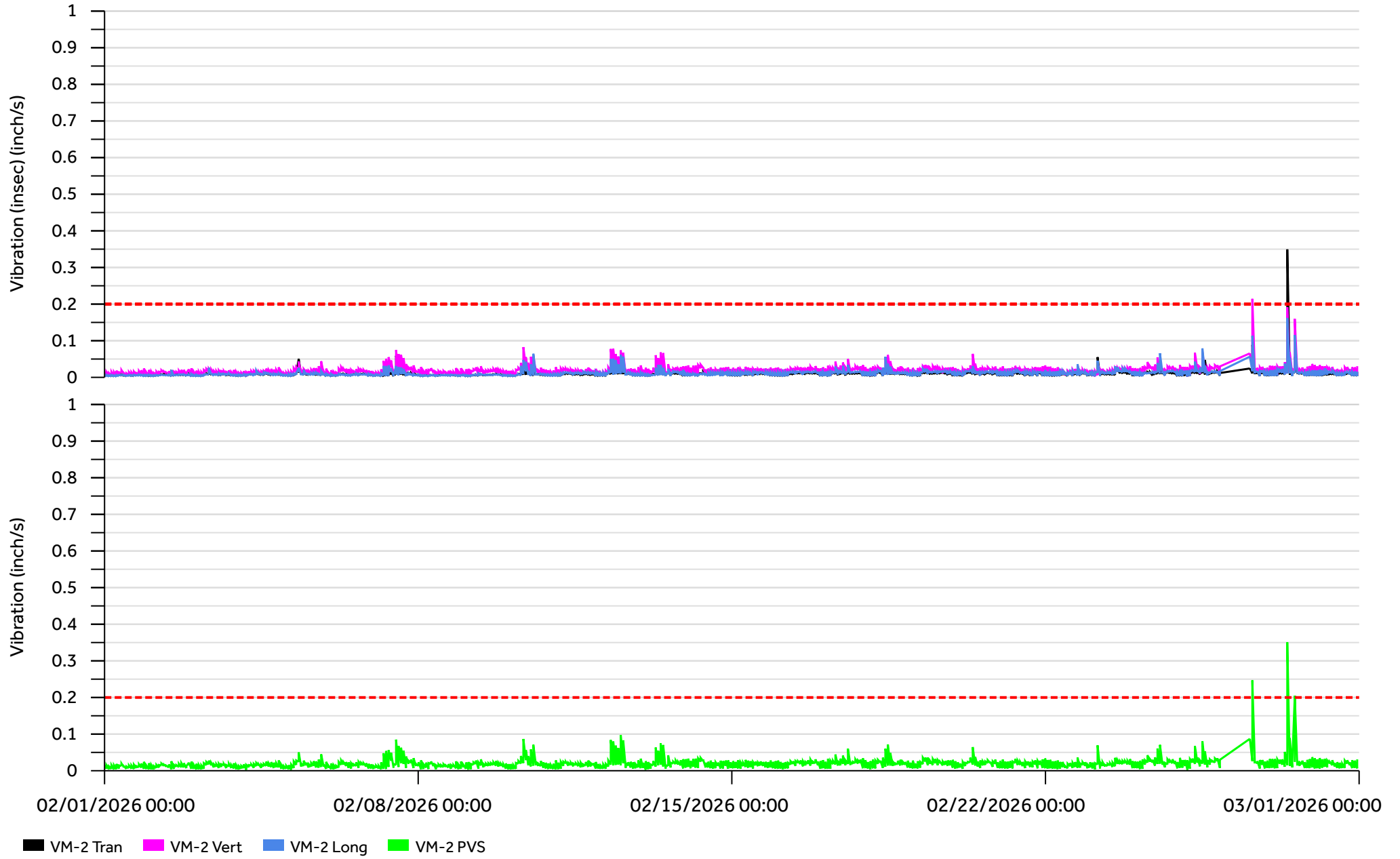
# Graph 1

VM-1- Vibration Monitor



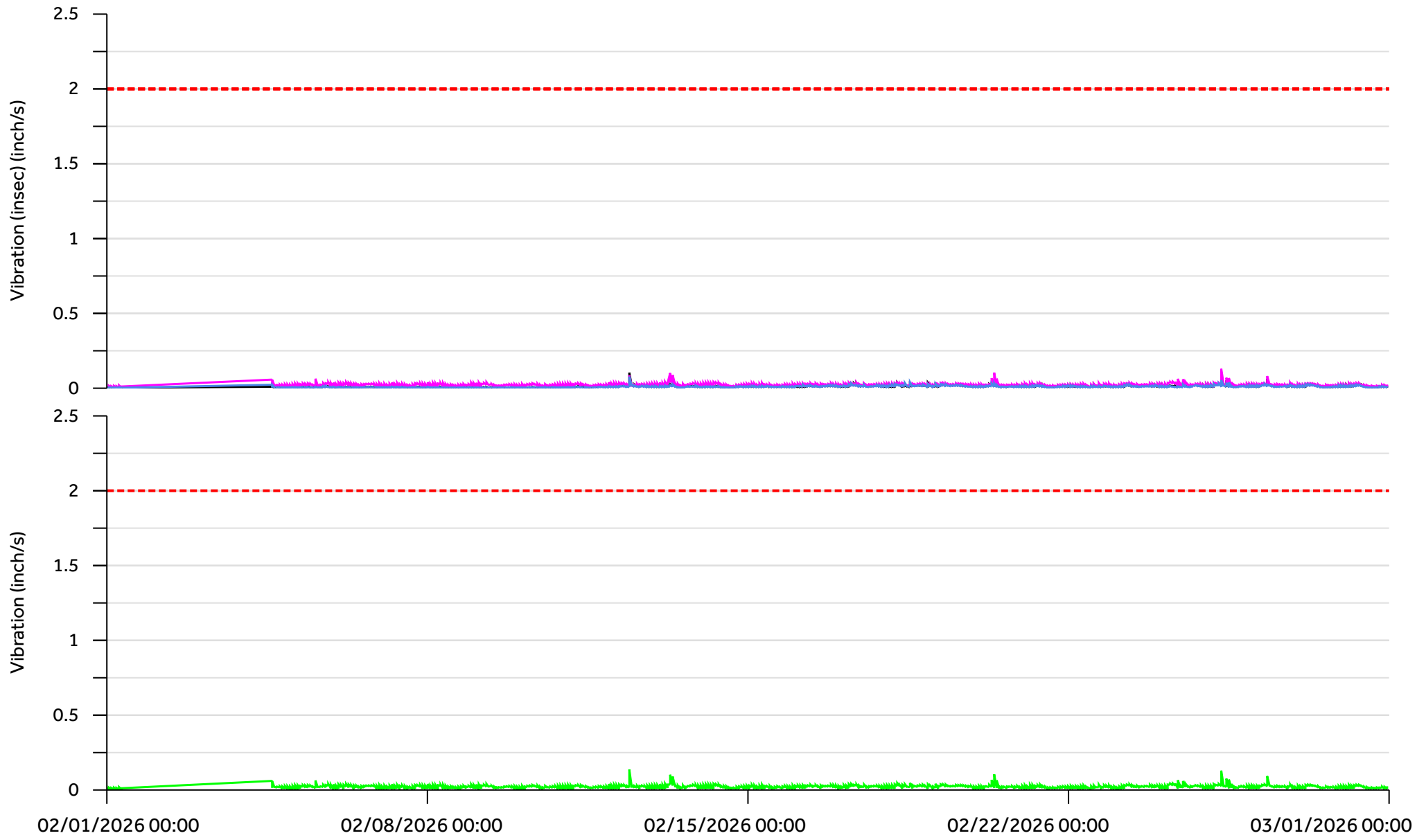
# Graph 2

VM-2- Vibration Monitor



# Graph 3

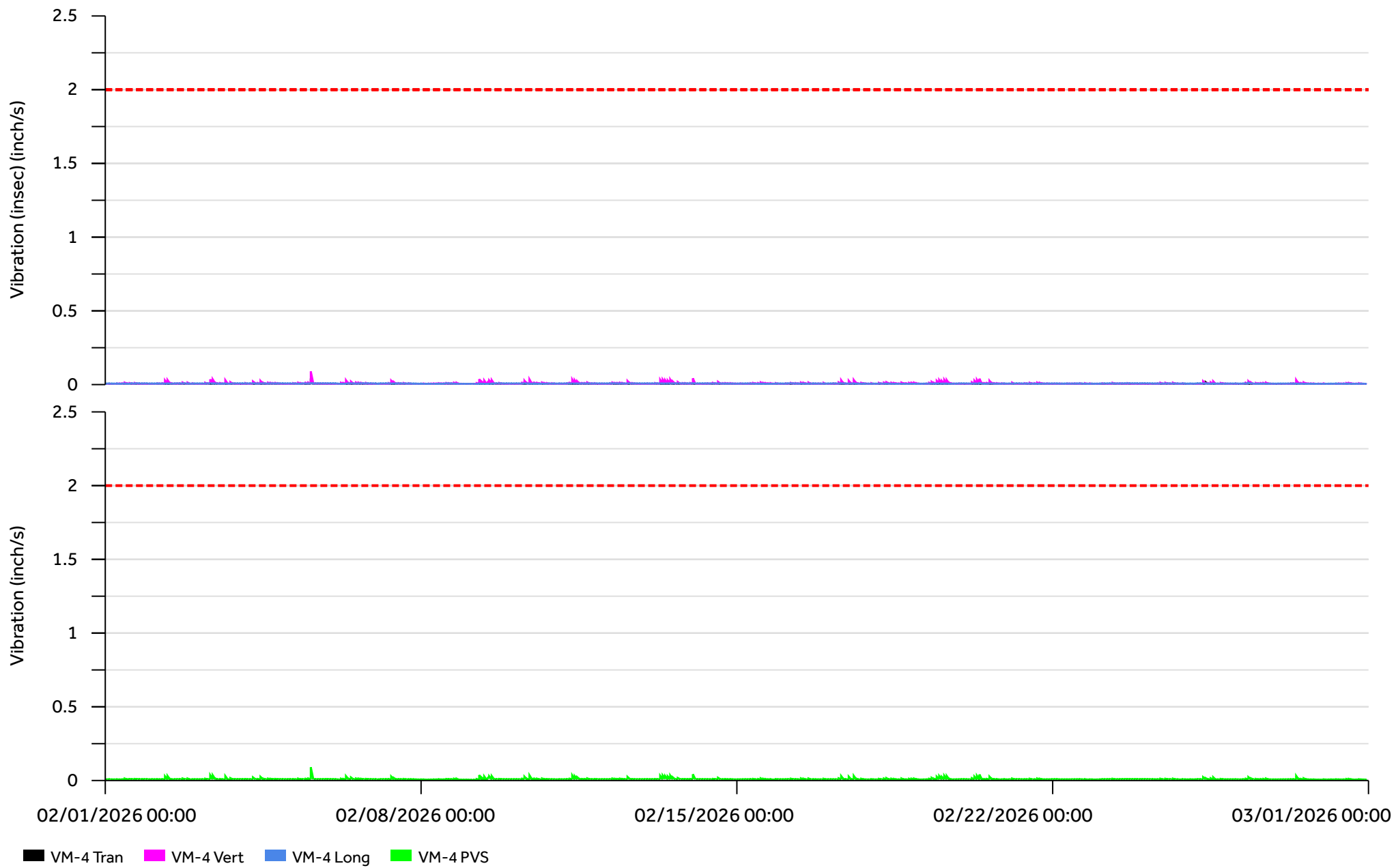
VM-3- Vibration Monitor



VM-3 Tran VM-3 Vert VM-3 Long VM-3 PVS

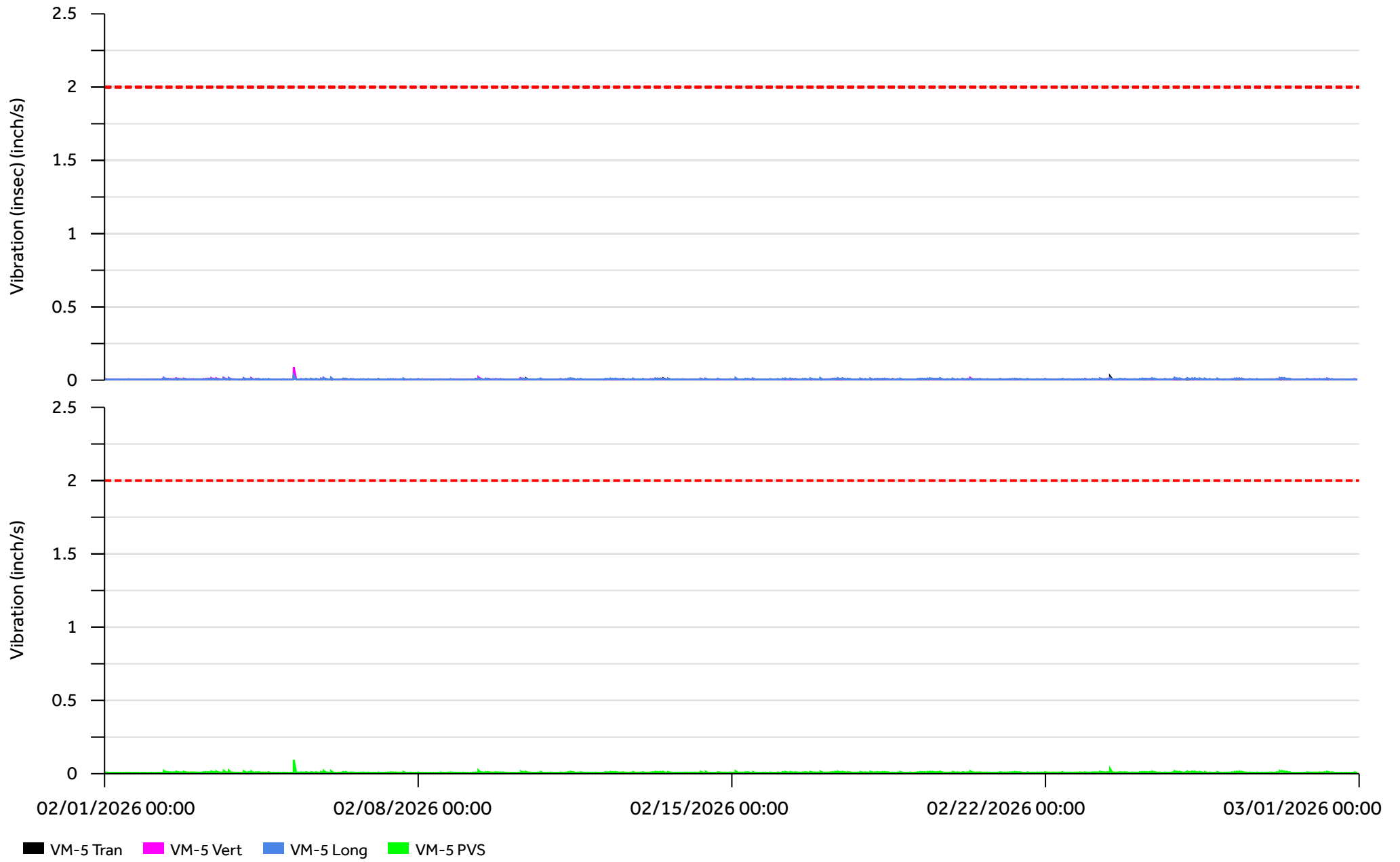
# Graph 4

VM-4- Vibration Monitor



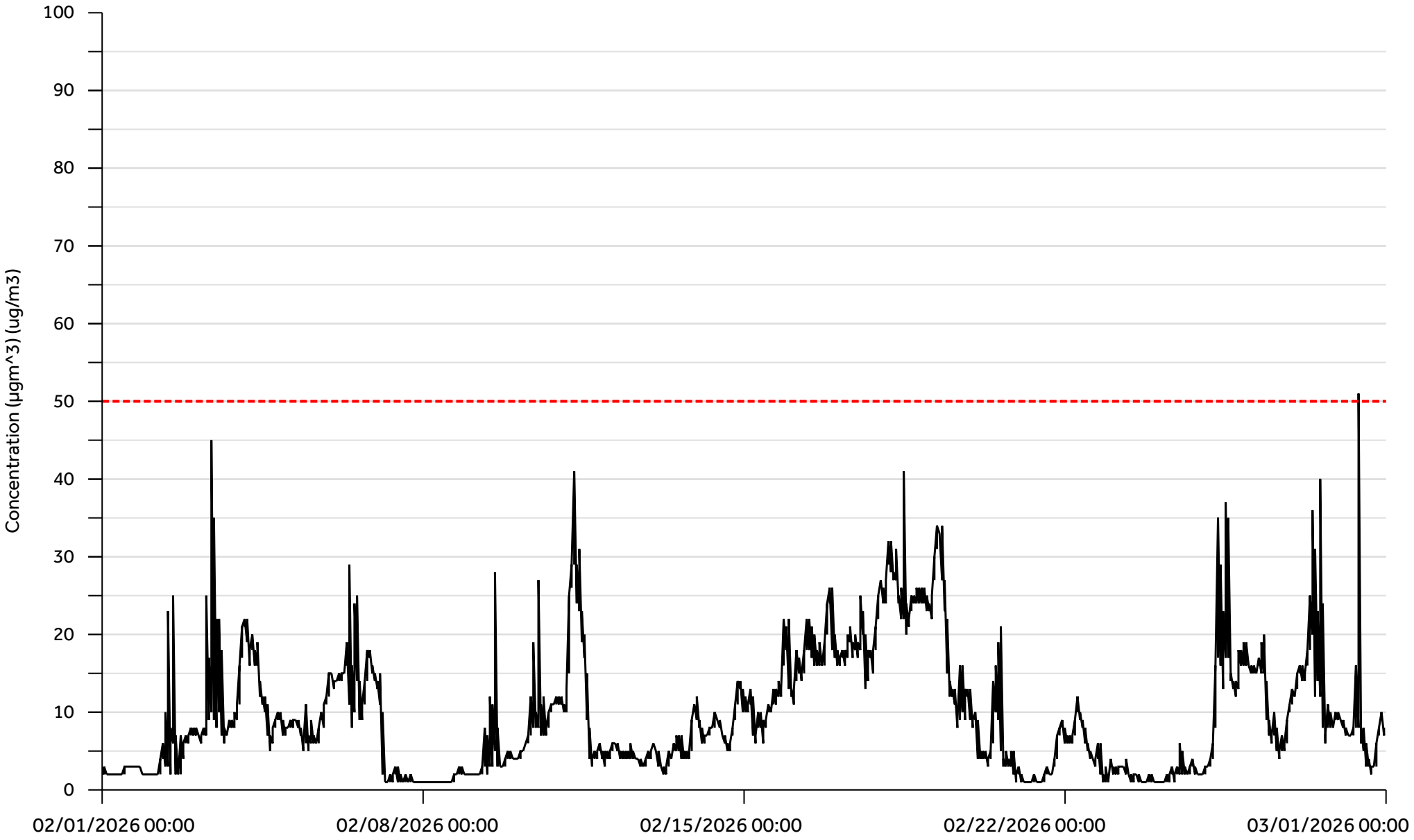
# Graph 5

VM-5- Vibration Monitor



# Graph 6

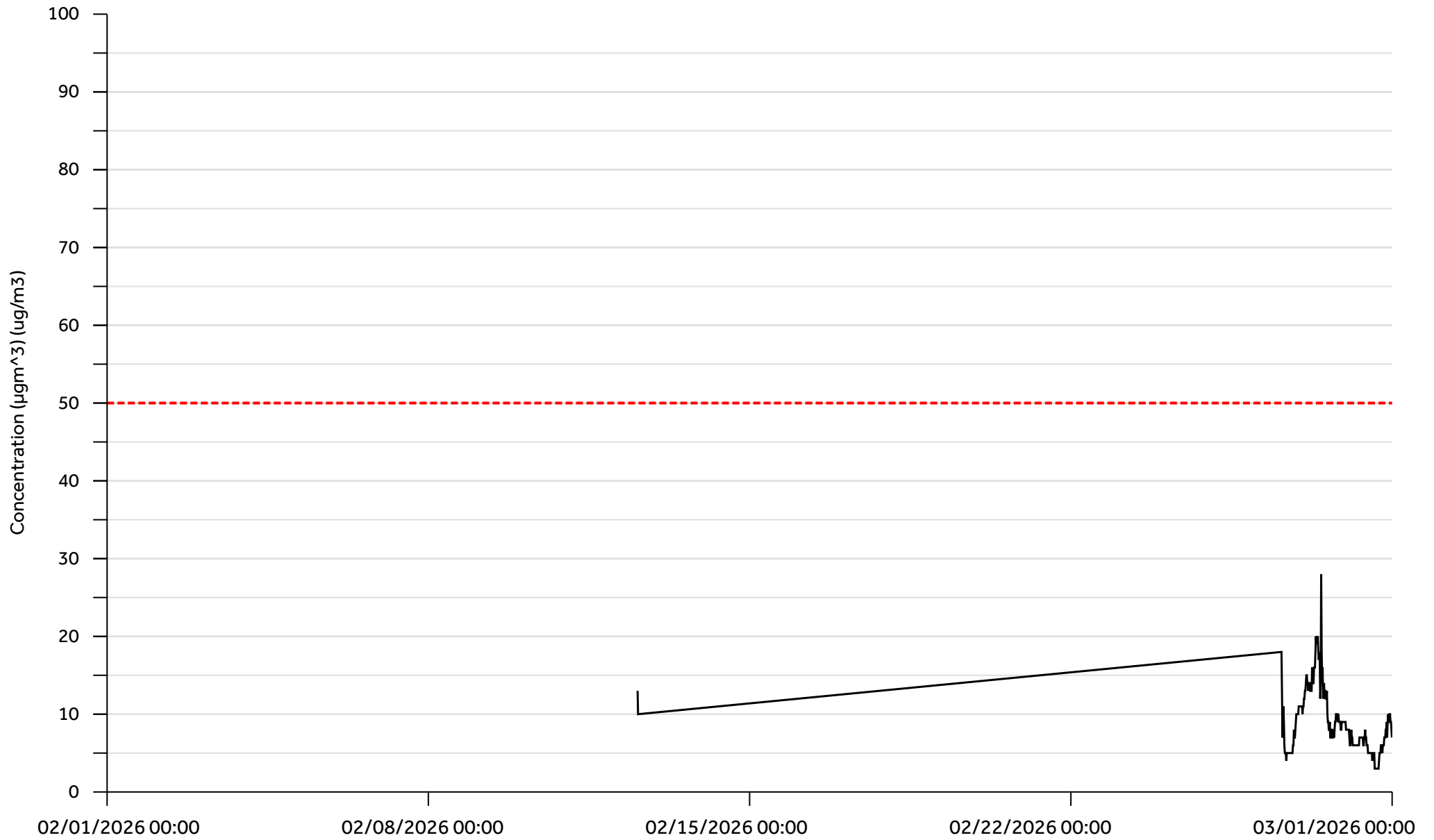
DM1 - PM10



■ DM1\_PM10

# Graph 7

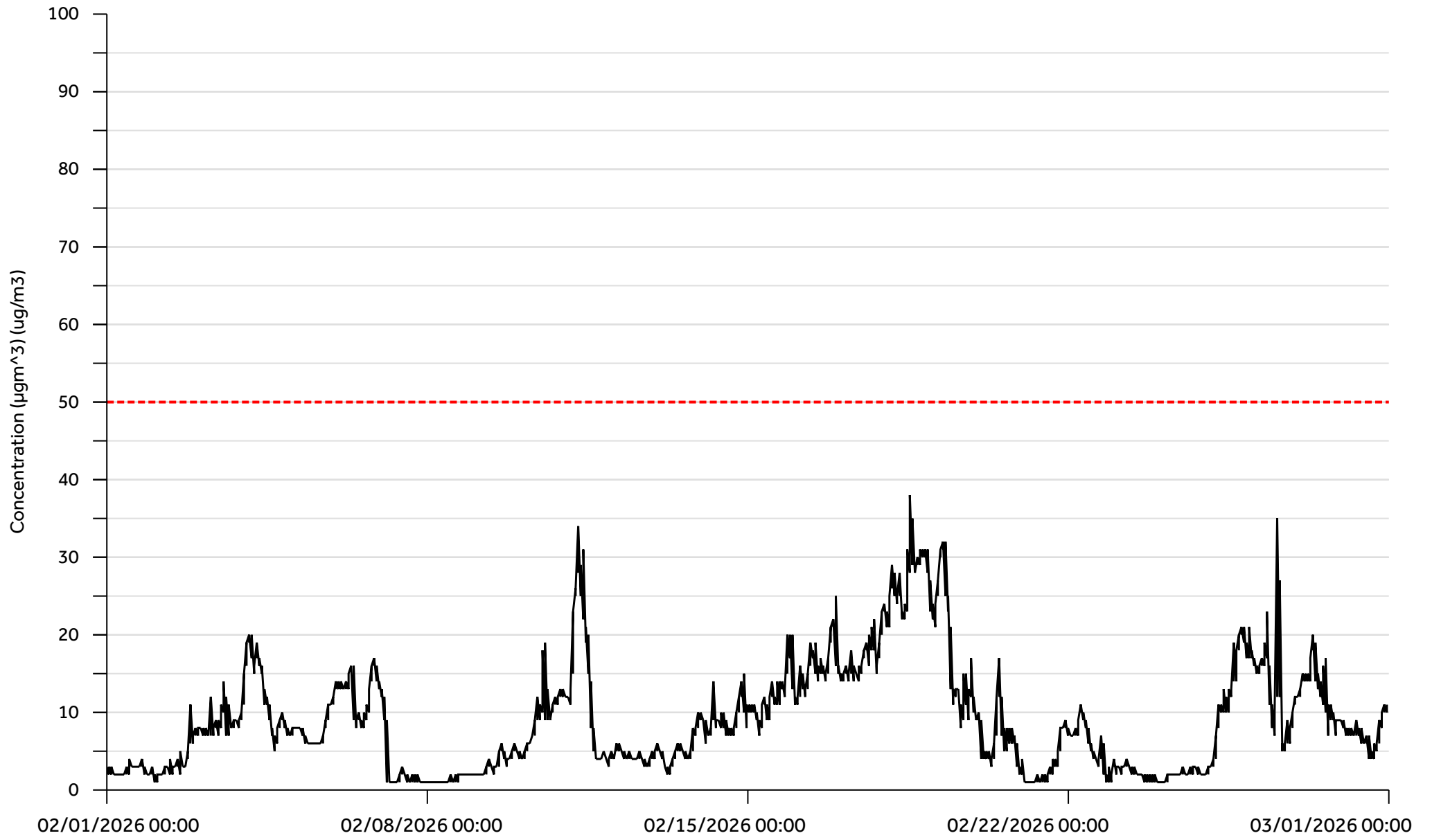
DM2-PM10



■ DM2\_PM10

# Graph 8

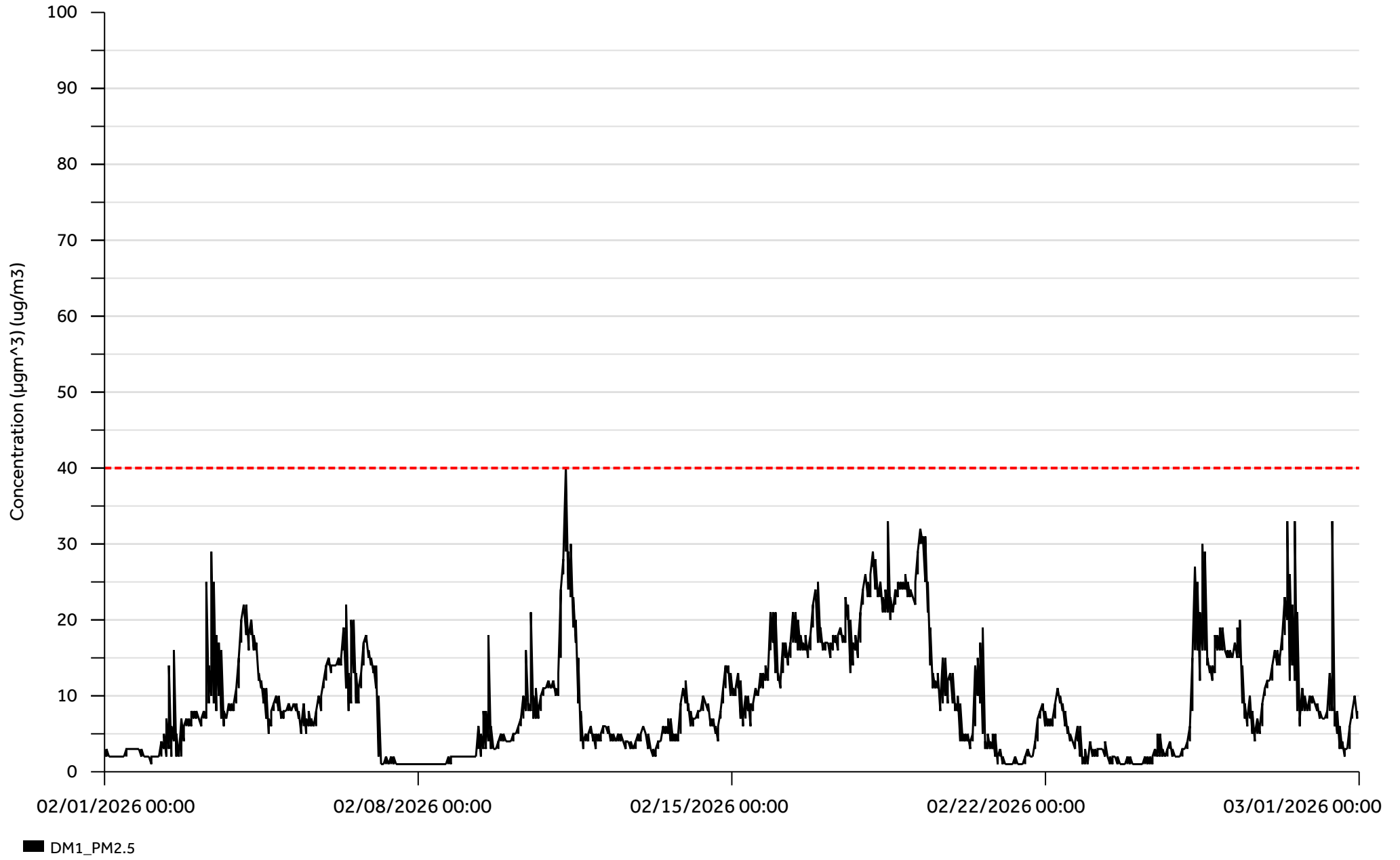
DM3-PM10



■ DM3\_PM10

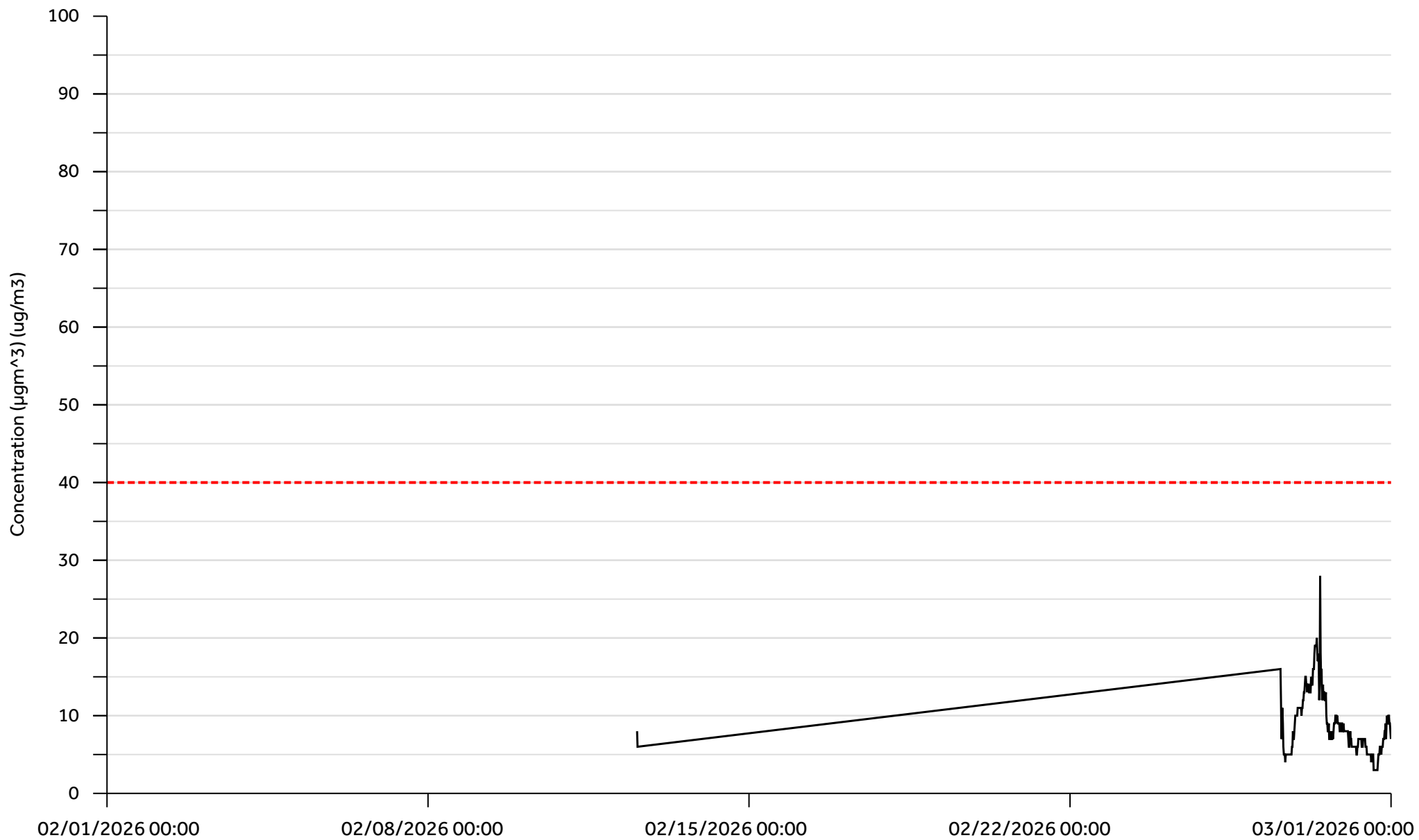
# Graph 9

DM1-PM2.5



# Graph 10

DM2-PM2.5



■ DM2\_PM2.5

# Graph 11

DM3-PM2.5

