Northern Bus Garage
Noise, Vibration, and Dust Monitoring Report (January 2026)

Noise, Vibration, and Dust levels were monitored as part of the reconstruction of Northern Bus Garage, 4615 14 th Street, NW, Washington, DC, for the month of January 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, Mic2, Mic3, and Mic5 recorded over one-third of their exceedances out of working hours. Mic2, Mic3, Mic4, and Mic5 all had their loudest exceedances 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 base d 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

Instrument Type	Monitoring Threshold
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 January are listed below.

- VM2 – Exceedance with a reading of 0.69 in/sec on January 8 at 08:31.
- VM2 – Exceedance with a reading of 0.21 in/sec on January 13 at 12:45.
- VM2 – Exceedance with a reading of 0.49 in/sec on January 22 at 12:47.

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

Dust Monitoring Measurement	Monitoring Threshold
Particulates (PM2.5)	40 µg/m^3
Particulates (PM10)	50 µg/m^3

No operating issue with the monitoring instruments was identified.

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

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

- DM1 – Exceedance of the PM10 limit with a reading of 63 µg/m^3 on January 8 at 09:16.
- DM1 – Exceedance of the PM10 limit with a reading of 68 µg/m^3 on January 14 at 08:05.
- DM1 – Exceedance of the PM10 limit with a reading of 83 µg/m^3 on January 22 at 08:51.
- DM1 – Exceedance of the PM2.5 limit with a reading of 43 µg/m^3 on January 7 at 08:06.
- DM1 – Exceedance of the PM2.5 limit with a reading of 42 µg/m^3 on January 14 at 08:05.
- DM1 – Exceedance of the PM2.5 limit with a reading of 54 µg/m^3 on January 22 at 08:51.

Figure 1: Vibration and Noise Monitor Location Plan

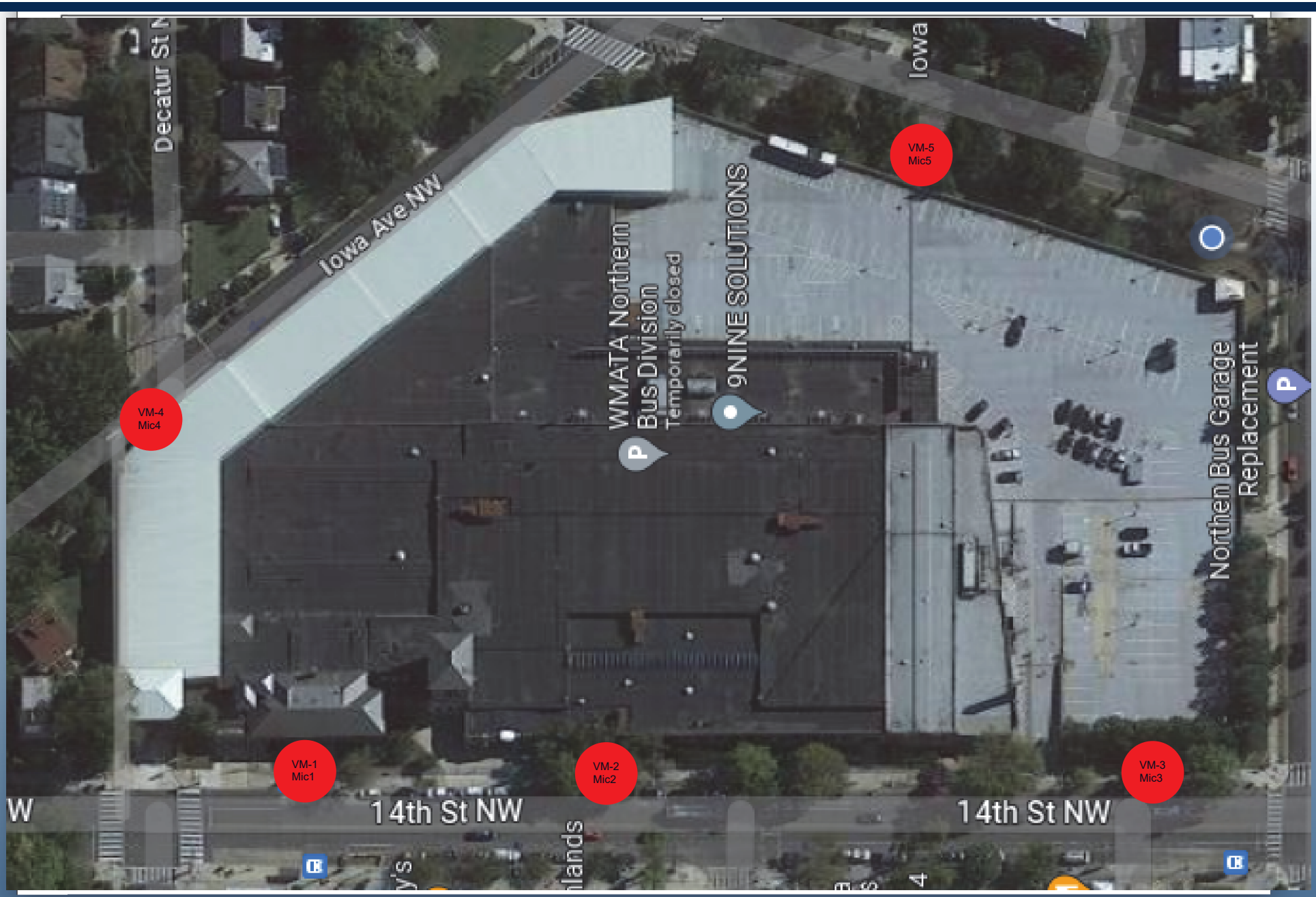


Figure 2: Dust Monitor Location Plan

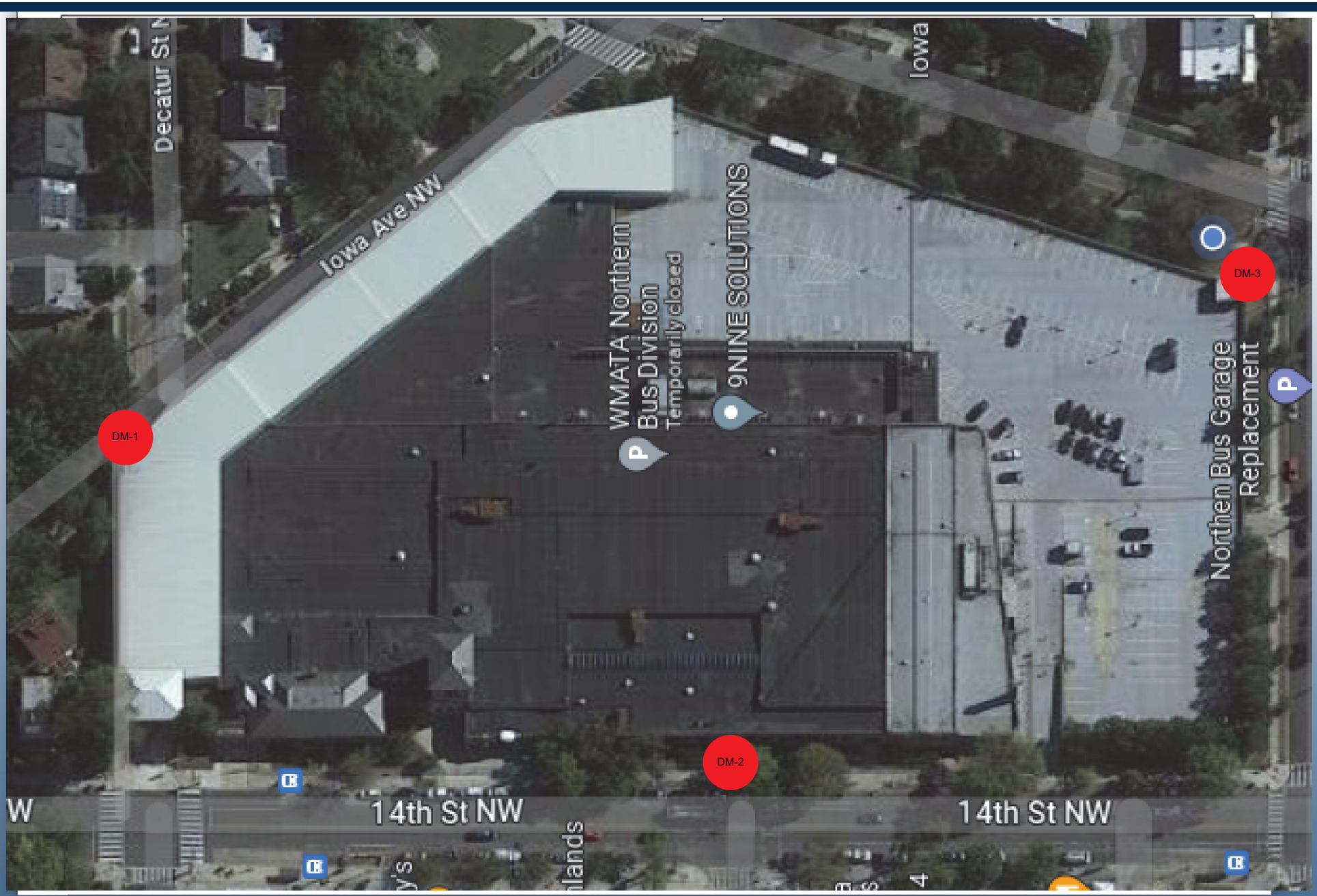


Table 1: Noise Summaries

VM1-MIC		
	Exceedance	Percentage
Work hours	563	59.39%
After hours	183	19.30%
Weekends	202	21.31%
Total	948	100%

VM1-MIC			
	Work hours	After hours	Weekends
Lmax (dBA)	112	109	110.3
Lmin (dBA)	85.2	60.6	60.5
L10 (dBA)	89	74	75
L90 (dBA)	87	62	62
Leq (dBA)	87.9	77.7	77.8

VM2-MIC		
	Exceedance	Percentage
Work hours	292	66.36%
After hours	102	23.18%
Weekends	46	10.45%
Total	440	100%

VM2-MIC			
	Work hours	After hours	Weekends
Lmax (dBA)	107.3	108.3	107
Lmin (dBA)	76	68	51.4
L10 (dBA)	94	75	71
L90 (dBA)	79	69	54
Leq (dBA)	89.1	75.4	75.7

VM3-MIC		
	Exceedance	Percentage
Work hours	568	60.11%
After hours	194	20.53%
Weekends	183	19.37%
Total	945	100%

VM3-MIC			
	Work hours	After hours	Weekends
Lmax (dBA)	108	110.3	107
Lmin (dBA)	76.3	54.6	65
L10 (dBA)	92	73	71
L90 (dBA)	77	56	66
Leq (dBA)	86.1	76.5	78.4

VM4-MIC		
	Exceedance	Percentage
Work hours	153	84.53%
After hours	14	7.73%
Weekends	14	7.73%
Total	181	100%

VM4-MIC			
	Work hours	After hours	Weekends
Lmax (dBA)	111.7	101.6	113.4
Lmin (dBA)	77.8	41.1	47
L10 (dBA)	98	58	66
L90 (dBA)	79	44	52
Leq (dBA)	91.5	65.7	83.2

VM5-MIC		
	Exceedance	Percentage
Work hours	136	55.51%
After hours	48	19.59%
Weekends	61	24.90%
Total	245	100%

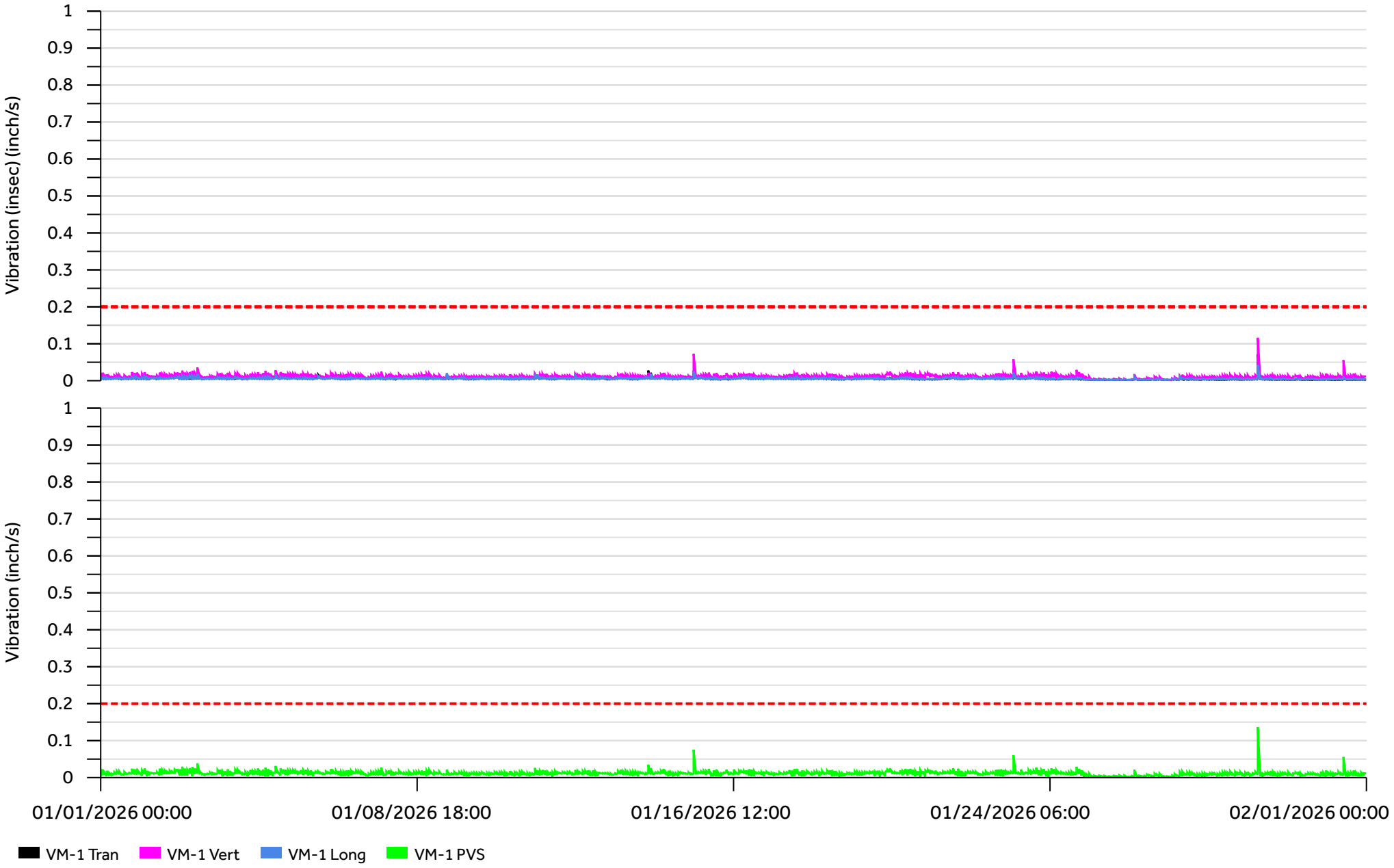
VM5-MIC			
	Work hours	After hours	Weekends
Lmax (dBA)	108	110.3	111
Lmin (dBA)	52.6	44	51.8
L10 (dBA)	74	69	70
L90 (dBA)	58	49	54
Leq (dBA)	78.5	79.2	79.5

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.

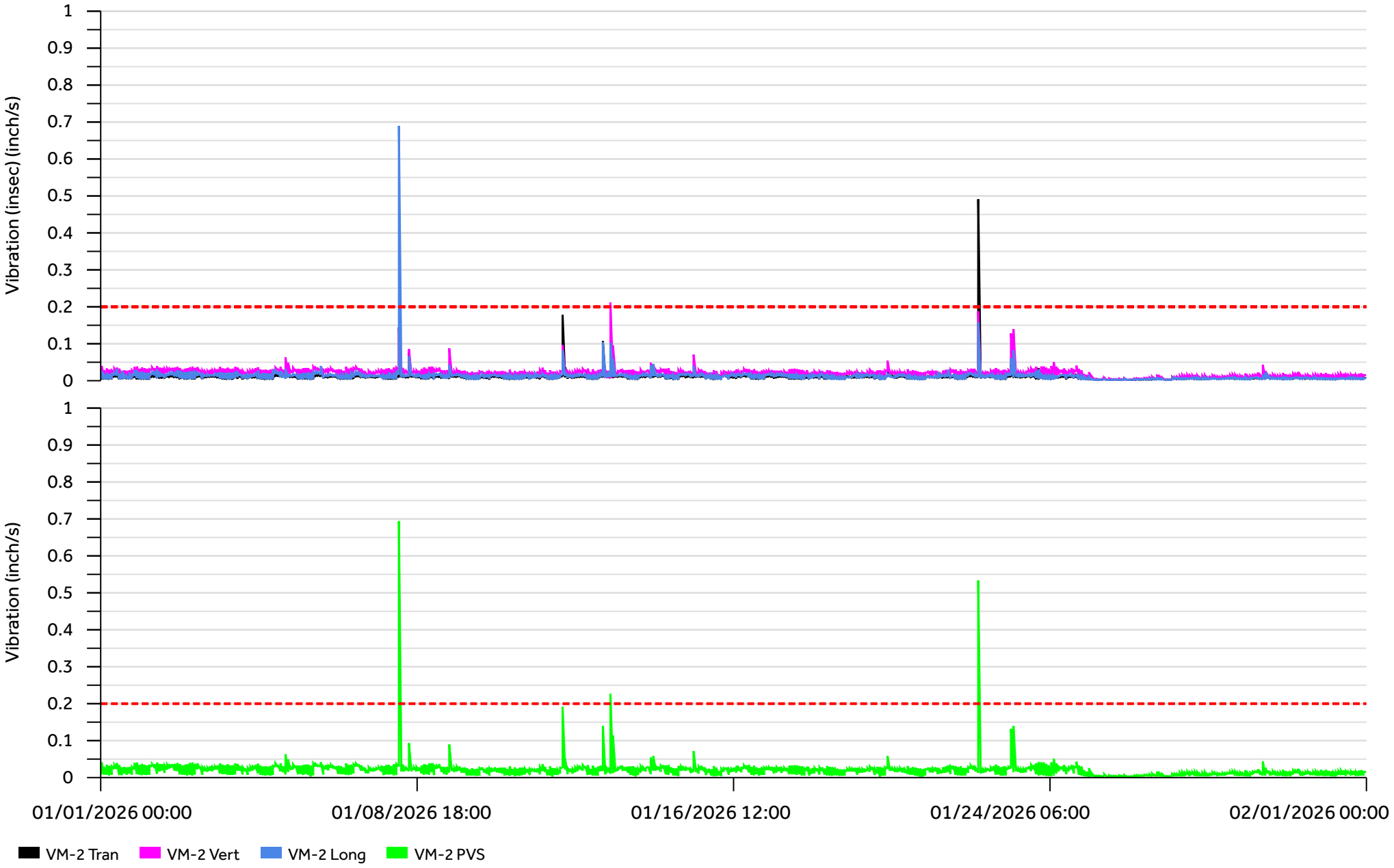
Graph 1

VM-1- Vibration Monitor



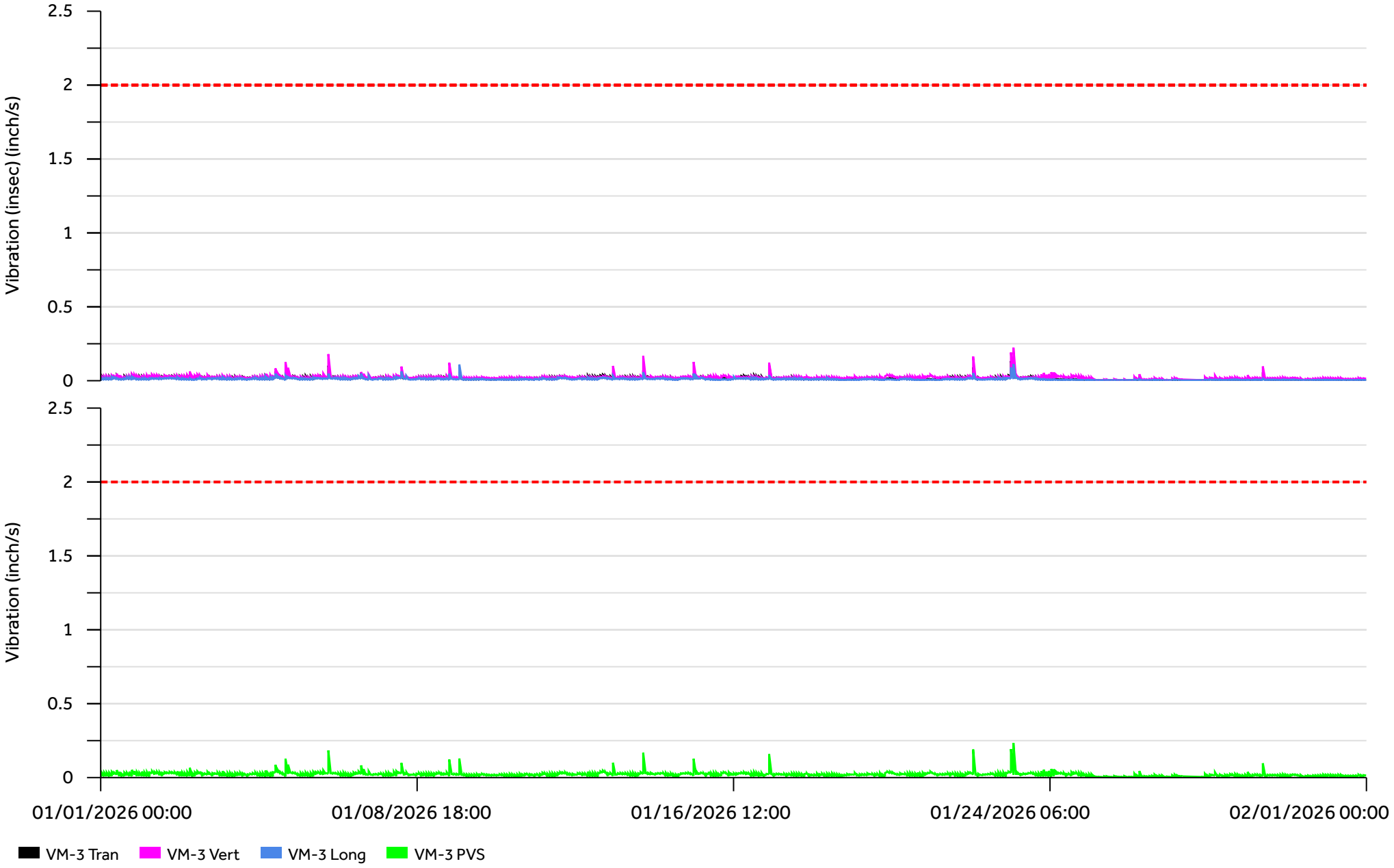
Graph 2

VM-2- Vibration Monitor



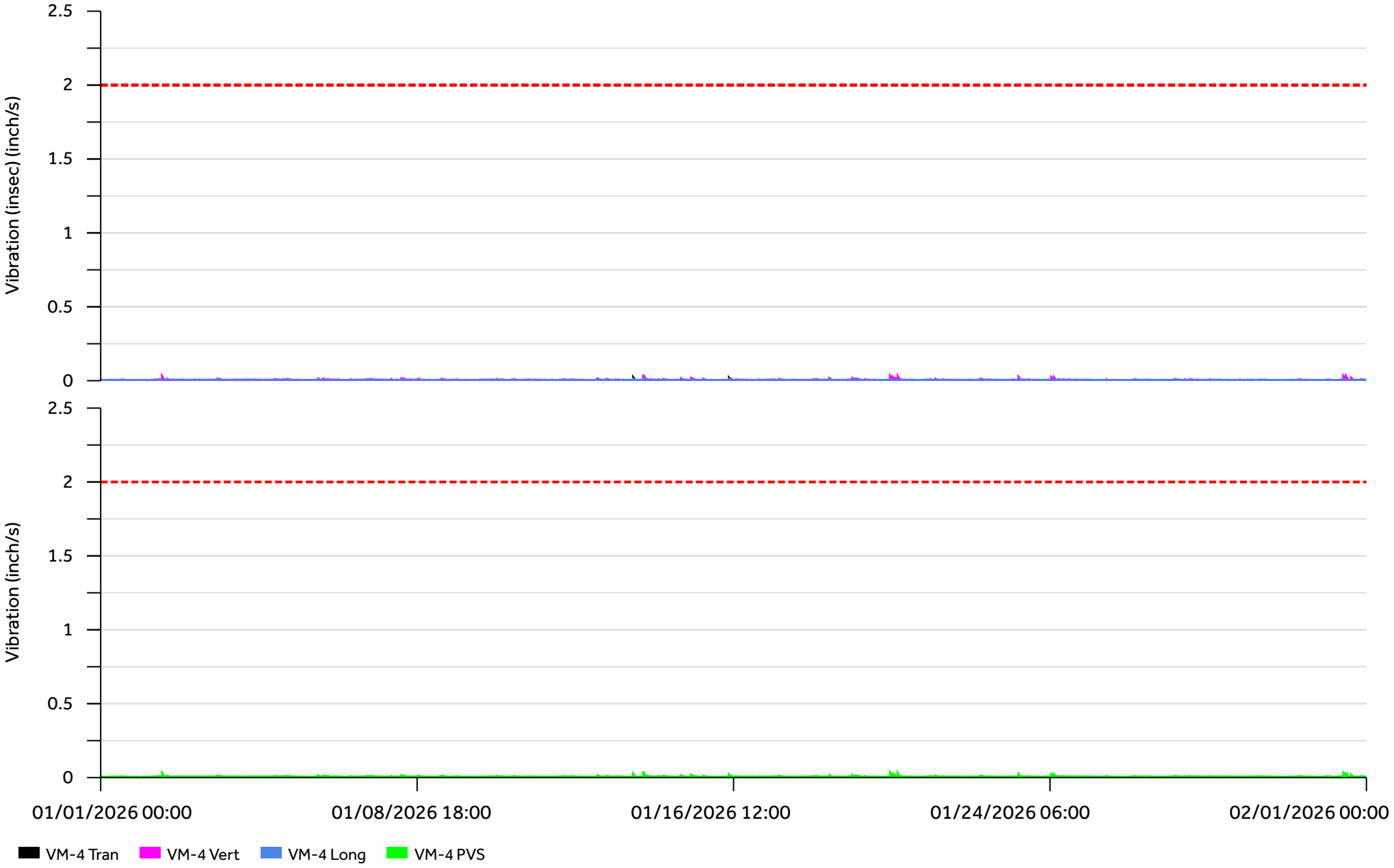
Graph 3

VM-3- Vibration Monitor



Graph 4

VM-4- Vibration Monitor

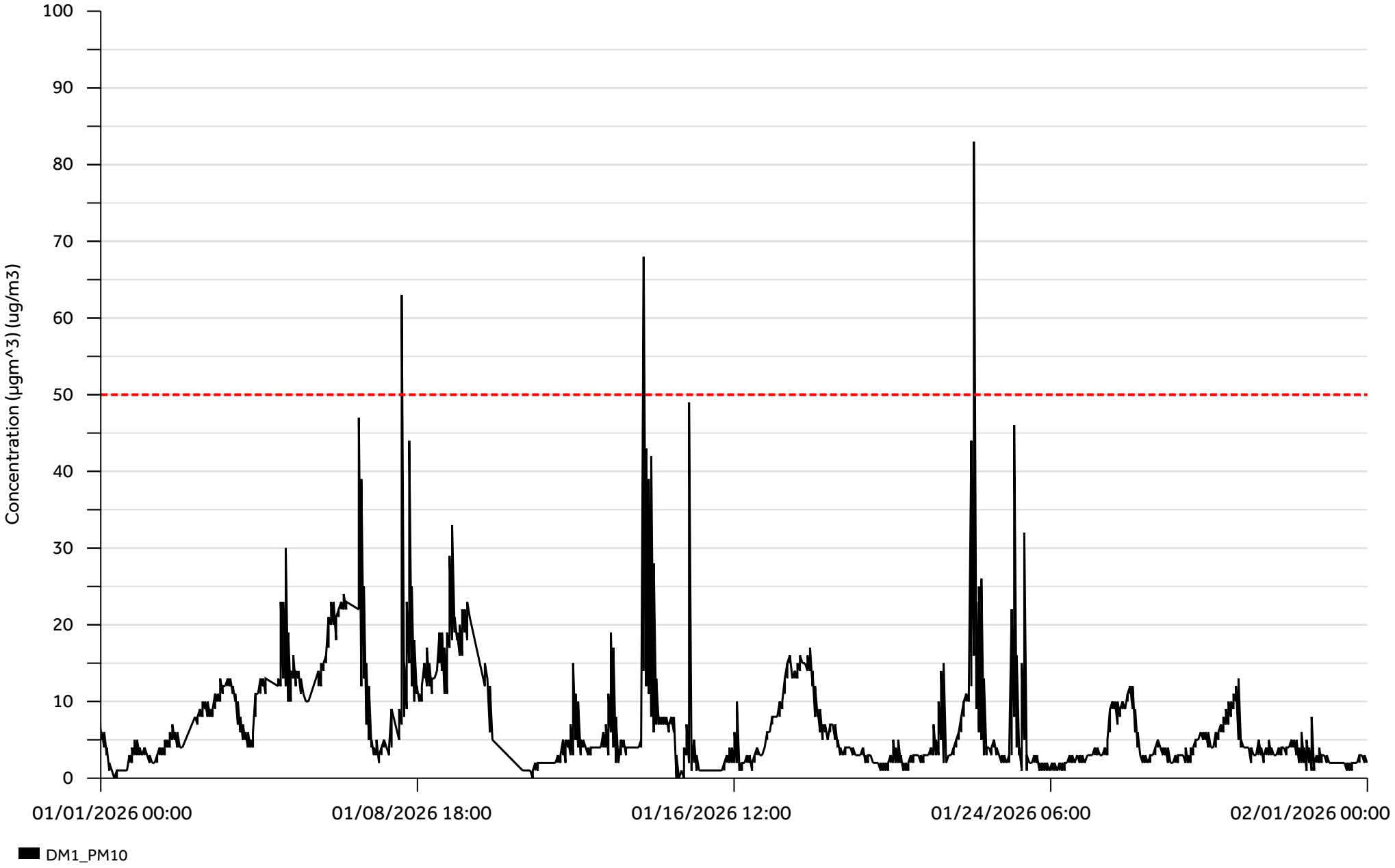


Graph 5

VM-5- Vibration Monitor

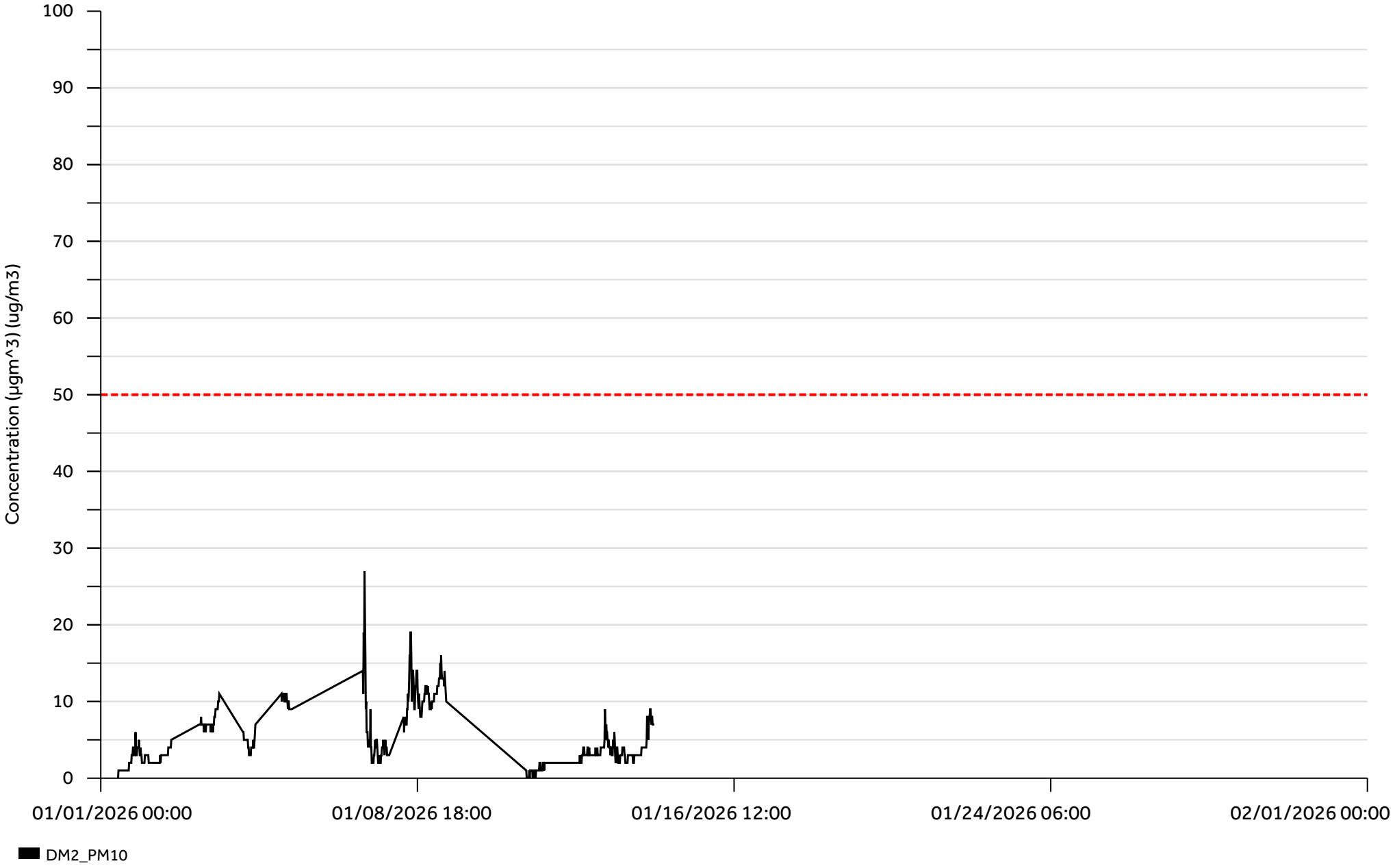
Graph 6

DM1 - PM10



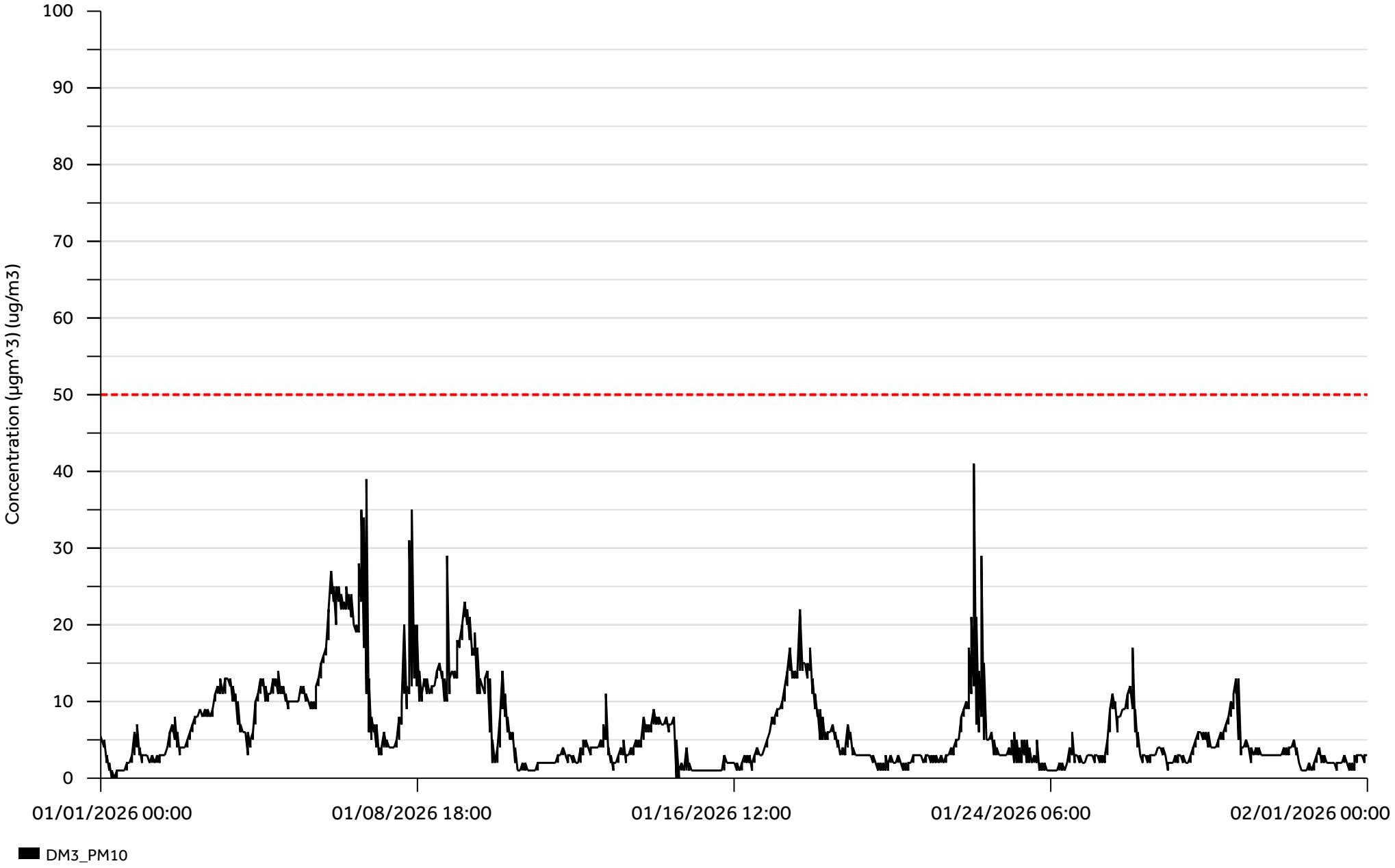
Graph 7

DM2-PM10



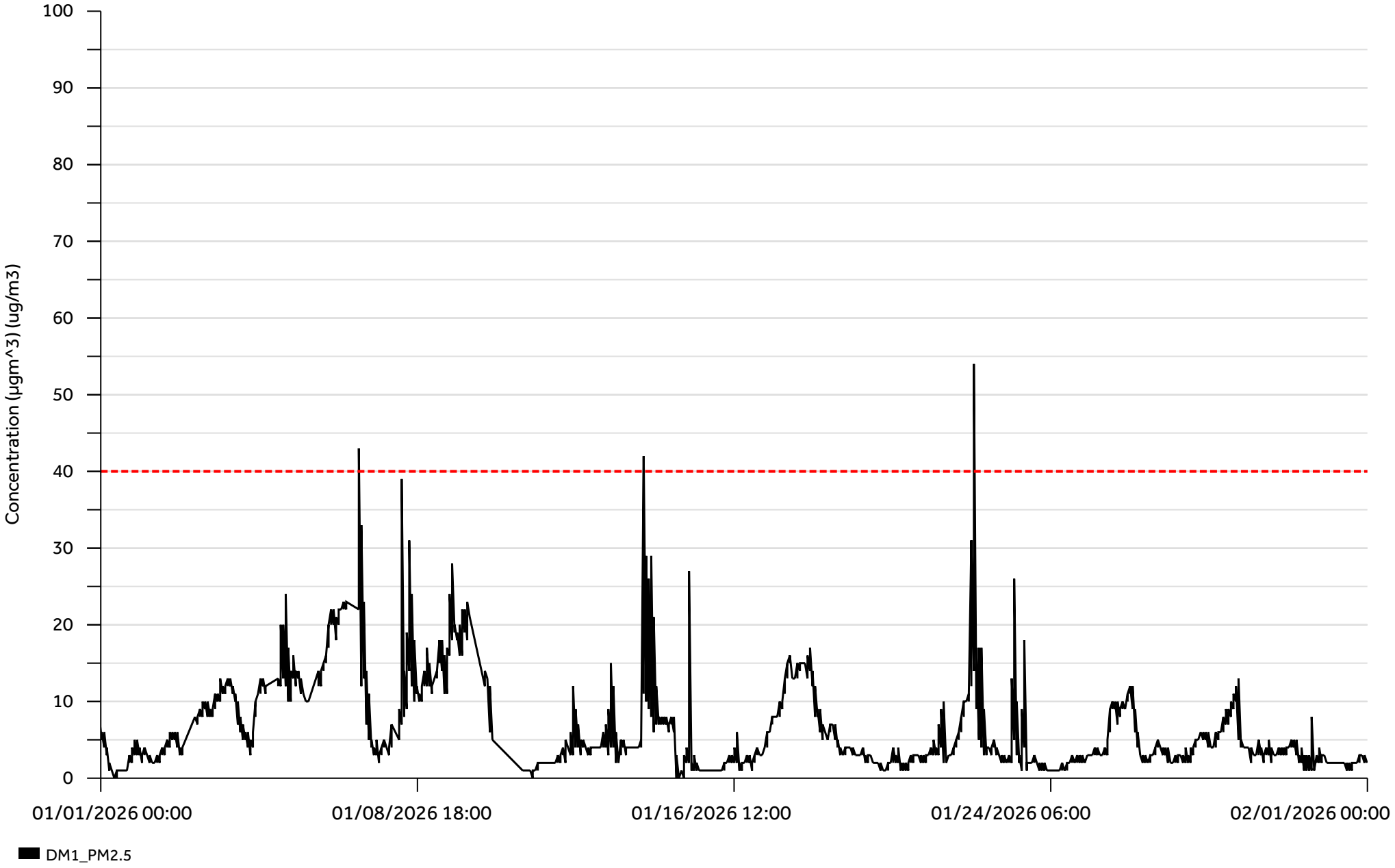
Graph 8

DM3-PM10



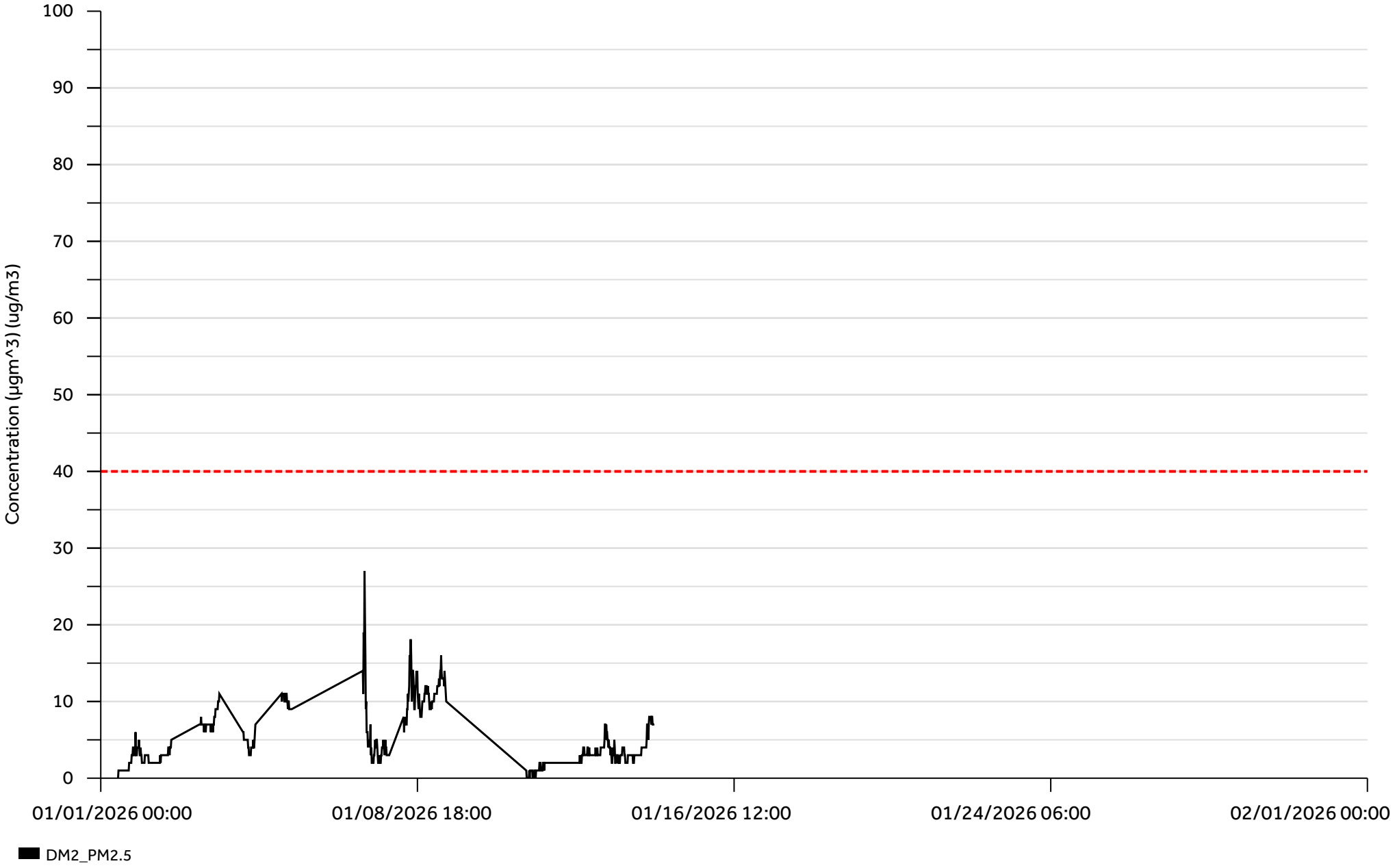
Graph 9

DM1-PM2.5



Graph 10

DM2-PM2.5



Graph 11

DM3-PM2.5