

Air Quality and Dust Monitoring Monthly Report – April 2019

Birmingham City Council



Department for Transport

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Monthly Summary

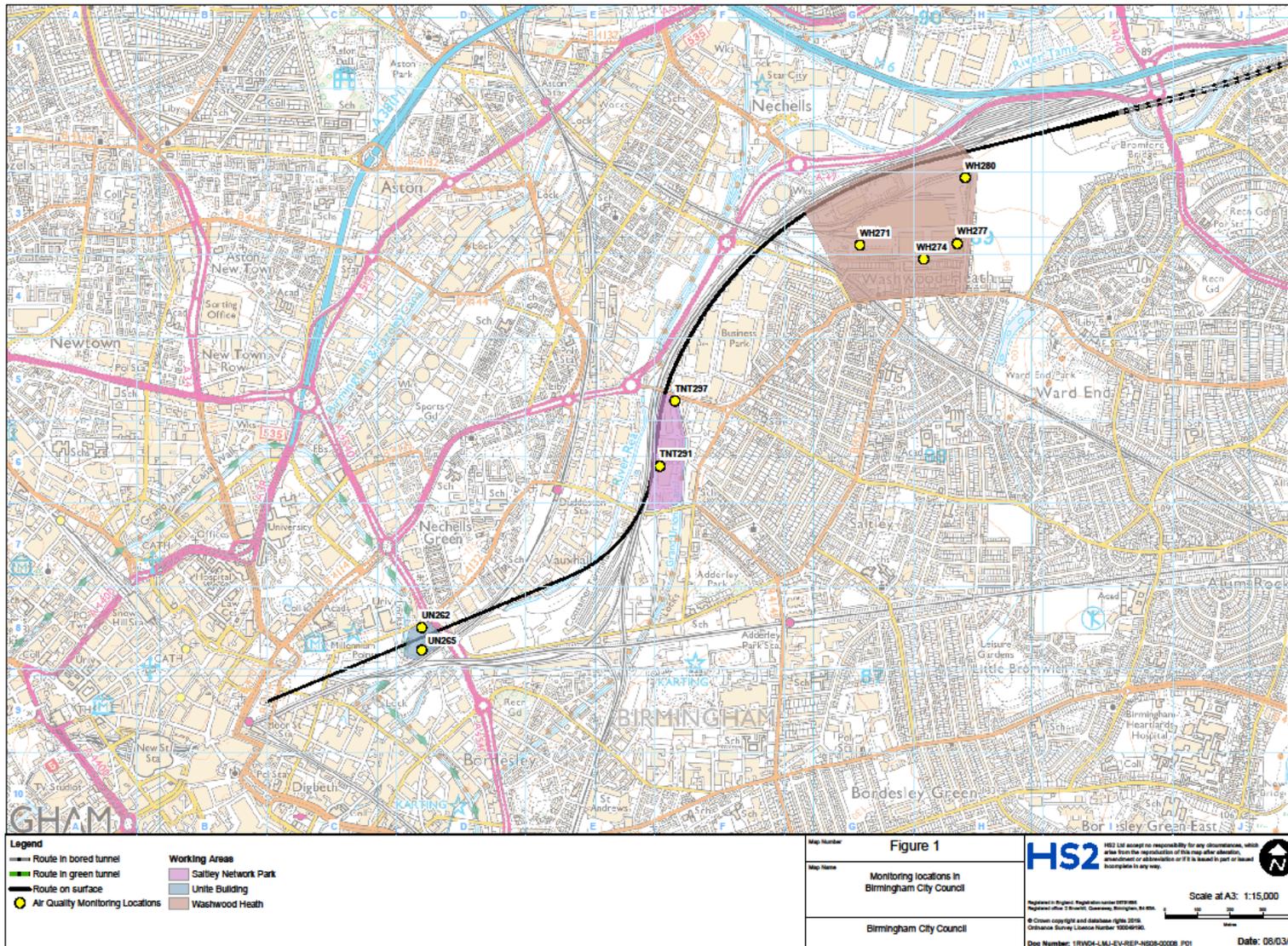
- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High-Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of dust monitoring undertaken within Birmingham City Council (BCC) during April 2019.
- 1.1.2 Figure 1 in Appendix A indicates the current worksite together with dust monitoring locations for April 2019.
- 1.1.3 This summary should be read in conjunction with the overview monitoring report monthly available from www.gov.uk/government/collections/monitoring-the-environmental-effects-of-hs2, which highlights the applicable standards and guidance, as well as the air quality and dust monitoring methodologies to be implemented by nominated undertakers throughout construction.
- 1.1.4 The current phase of works commenced in BCC during September 2018 at the Washwood Heath Site, and in December 2018 at the Unite Building Site and Saltley Network Park Site, and will continue to run into 2019. Following completion of the demolition works at the UK Mail Site in September 2018, the dust monitoring was decommissioned (monitoring ID: HS21UKM262 and HS22UKM265).
- 1.1.5 The current worksites (Washwood Heath, Saltley and Unite), as presented in Appendix A, Figure 1, include demolition of the existing buildings. The majority of the buildings to be demolished are constructed of metal cladding and brick, and with steel structures at Unite. Crushing of the material will take place at Washwood Heath and Unite, however there will be no works taking place below slab level. There will be no crushing at Saltley Network Park.
- 1.1.6 Eight (8) dust monitors (DM11s) were installed for the current phase of work, of which, four (4) were installed at the Washwood Heath site, two (2) at the Unite Building Site, and two (2) dust monitors at the Saltley Network Park Site. The demolition and pre-demolition works are underway at these sites. The sites were previously classified with a high dust risk rating (Washwood Heath) and a medium to high dust risk rating (Saltley and Unite).
- 1.1.7 Dust monitoring locations and results for April 2019 are presented in Appendix B, Table 1 together with line charts for April from each dust monitor.
- 1.1.8 The trigger level of 190 $\mu\text{g}/\text{m}^3$, over a 1-hour period, in accordance with the updated guidance document '*Guidance on Monitoring in the Vicinity of Demolition and Construction Sites – October 2018*' has been applied.
- 1.1.9 During April 2019 two (2) incidents of trigger level exceedance were observed at the Washwood Heath site. Both of these exceedances were recorded by the device HS2-3WH-271. The first incident was recorded on 5th April at 14:00 Hrs, when the maximum PM_{10}

concentration recorded was 395.5 $\mu\text{g}/\text{m}^3$. On 9th April, another exceedance was recorded by the same device at 13:00 Hrs. PM_{10} concentration recorded during this event was 1033.1 $\mu\text{g}/\text{m}^3$. No other exceedances were observed during the month. The outcomes of the investigations relating to the triggers are presented in Table 2.

- 1.1.10 Data capture for April 2019 monitoring data was below 90% for monitors 271 (Washwood Heath 3), 274 (Washwood Heath 4), and 280 (Washwood Heath 6). Problems with power supply at these sites has been determined as the cause of this loss of data. Washwood Heath 3 was at the time experiencing ongoing telemetry issues, and data loss is not attributable faults with the device and it is considered to be a localised black spot. An investigation at Washwood Heath 6, has shown a modem fault as the reason for data loss at this monitor during April. Monitors 277, 262, 265, 291, and 297 all showed a data capture of greater than 90%.
- 1.1.11 No complaints were received relating to air quality and dust during this monitoring period (April 2019).

Appendix A – Worksite and Dust Monitoring Locations

Figure 1: Birmingham City Council Worksites and Monitoring locations during April 2019



Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and April 2019 Results

Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture rate (%)
HS2 3 WH 271	410698,289273	Monitor secured on a stand	High	Yes	N/A	42.6	9.4	1033.1	2	28.6
HS2 4WH 274	410661,288971	Monitor secured on a stand	High	Yes	N/A	20.7	0.7	121.2	0	63.3
HS2 5WH 277	410508,288901	Monitor secured on a stand	High	Yes	N/A	26.9	8.2	143.9	0	100.0
HS2 6WH 280	410214,288965	Monitor secured on a stand	High	Yes	N/A	13.6	9.6	24.3	0	1.1
HS2 1 UNITE 262	408204,287222	Monitor secured on a stand	Medium to High	Yes	N/A	23.1	6.7	132.7	0	99.4
HS2 2 UNITE 265	408203,287119	Monitor secured on a stand	Medium to High	Yes	N/A	23.5	6.0	124.8	0	99.6
HS2 7 TNT 291	409365,288254	Monitor secured on a stand	Medium to High	Yes	N/A	25.1	7.0	154.5	0	100.0
HS2 9 TNT 297	409296,287957	Monitor secured on a stand	Medium to High	Yes	N/A	24.7	5.8	144.9	0	100.0

Table 2: Summary of exceedances of trigger level in April 2019

Period exceeding trigger level	Worksite reference	Monitoring site ID	Complaint reference number (if applicable)	Reason	Resolution
05/04/2019 14:00	Washwood Heath	HS2 3 WH 271	N/A	High concentrations due to the generators powering the monitors malfunctioning and emitting smoke within the area of the monitor.	Generators at Washwood Heath were replaced and maintenance regime increased.
09/04/2019 13:00	Washwood Heath	HS2 3 WH 271	N/A	High concentrations due to the generators powering the monitors malfunctioning and emitting smoke within the area of the monitor.	Generators at Washwood Heath were replaced and maintenance regime increased.

Figure 1: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 3WH 271 (April 2019)

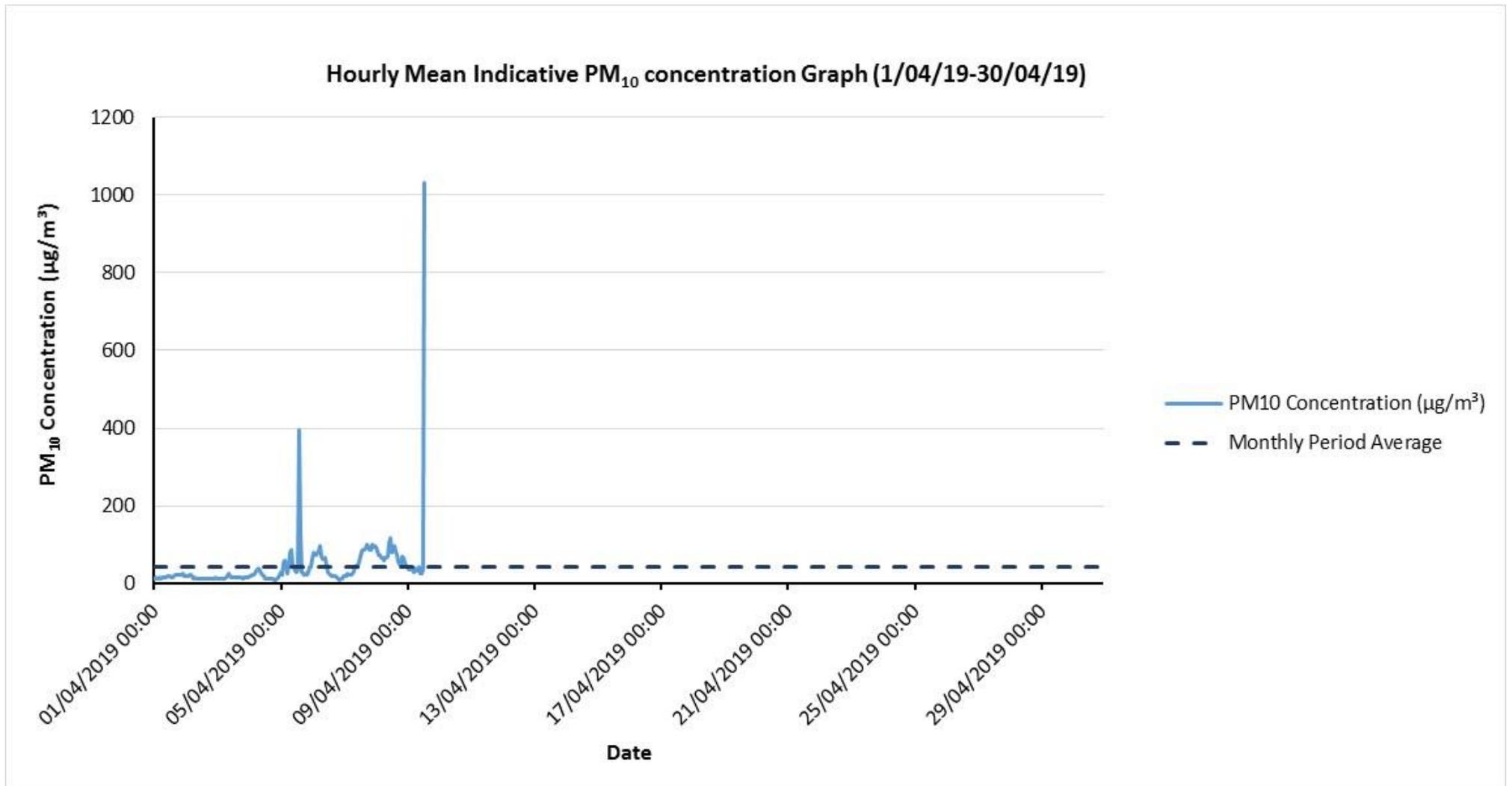


Figure 2: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 4WH 274 (April 2019)

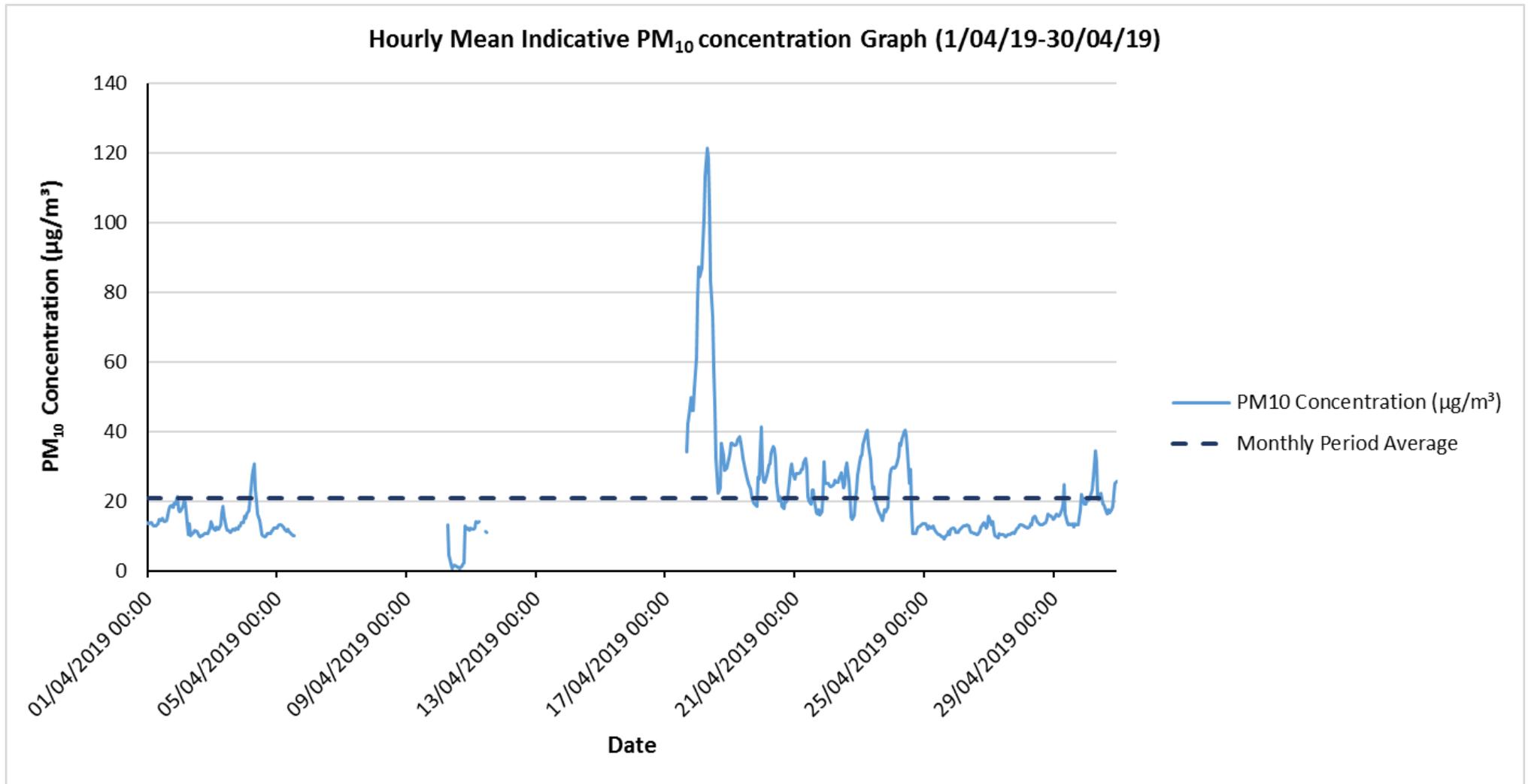


Figure 3: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 5WH 277 (April 2019)

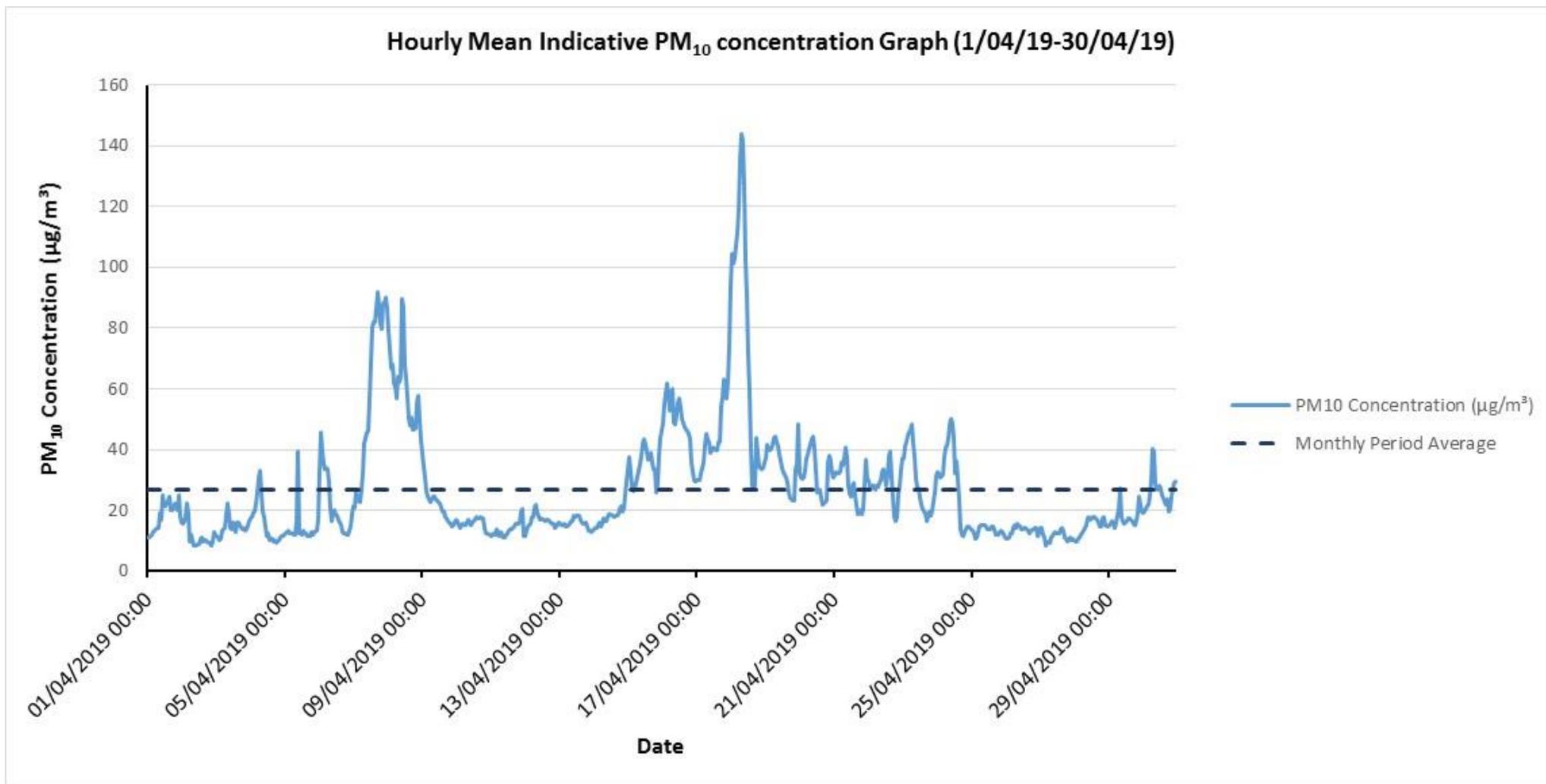


Figure 4: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 6WH 280 (April 2019)

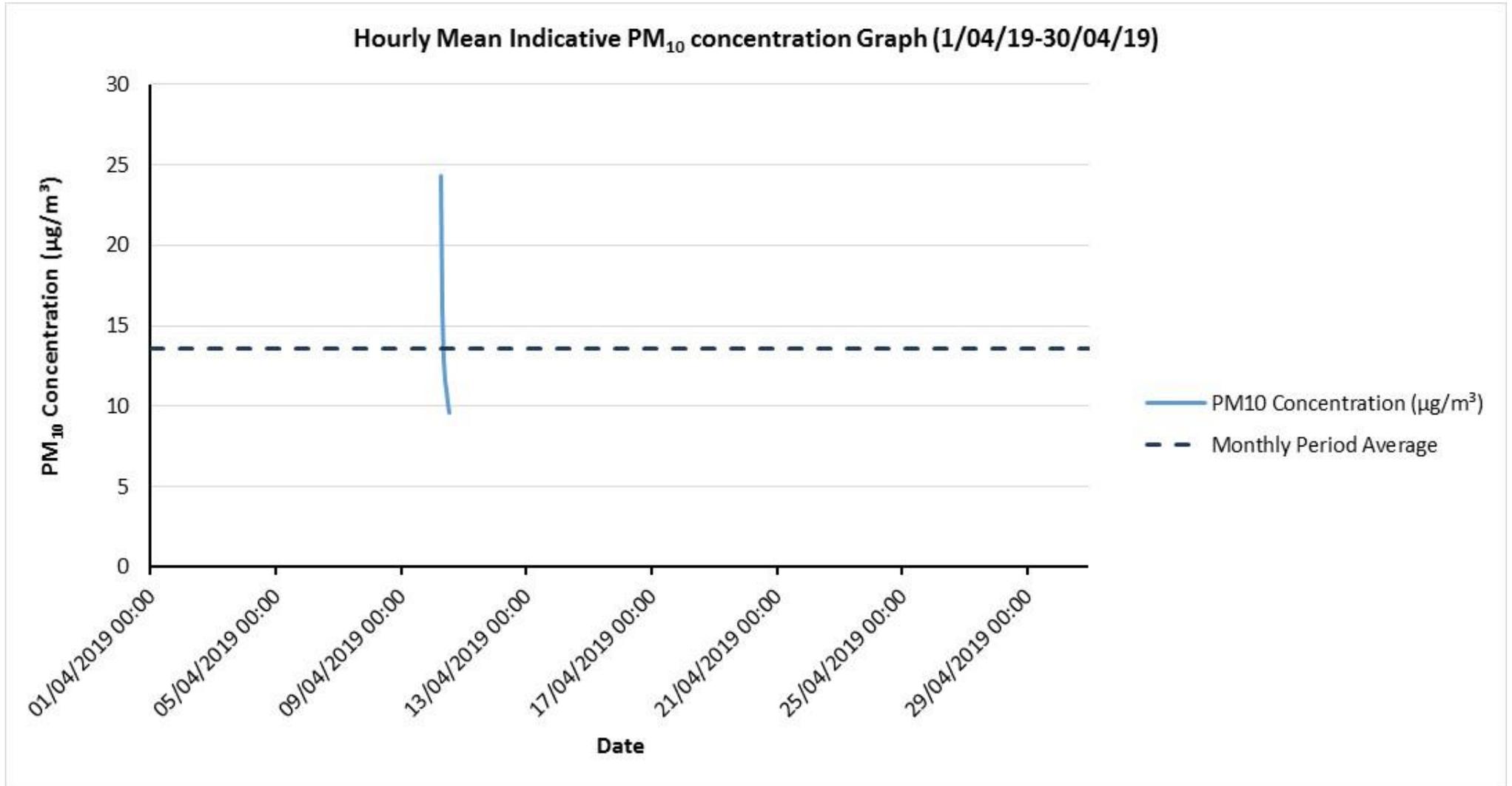


Figure 5: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 1 UNITE 262 (April 2019)

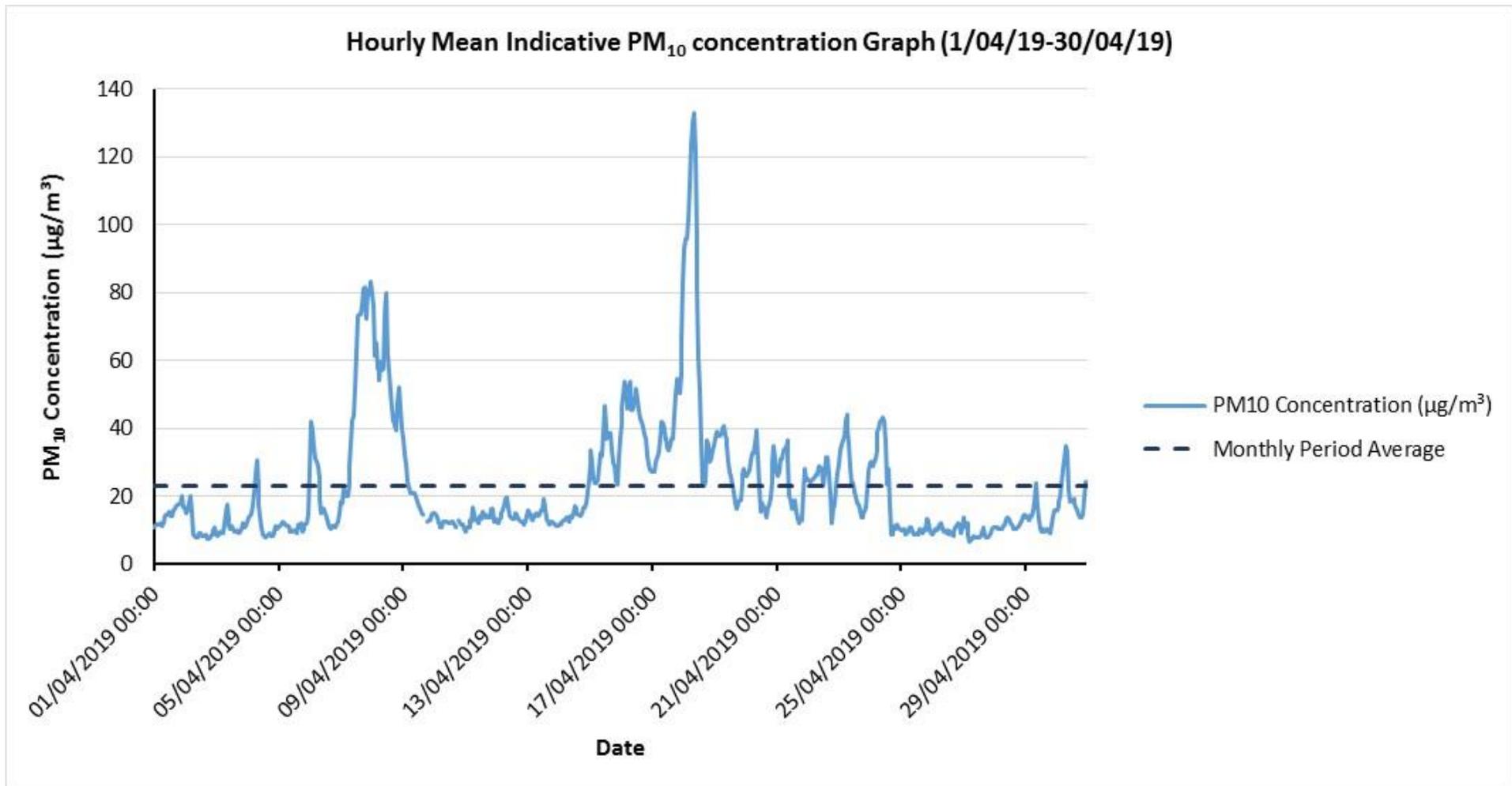


Figure 6: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 2 UNITE 265 (April 2019)

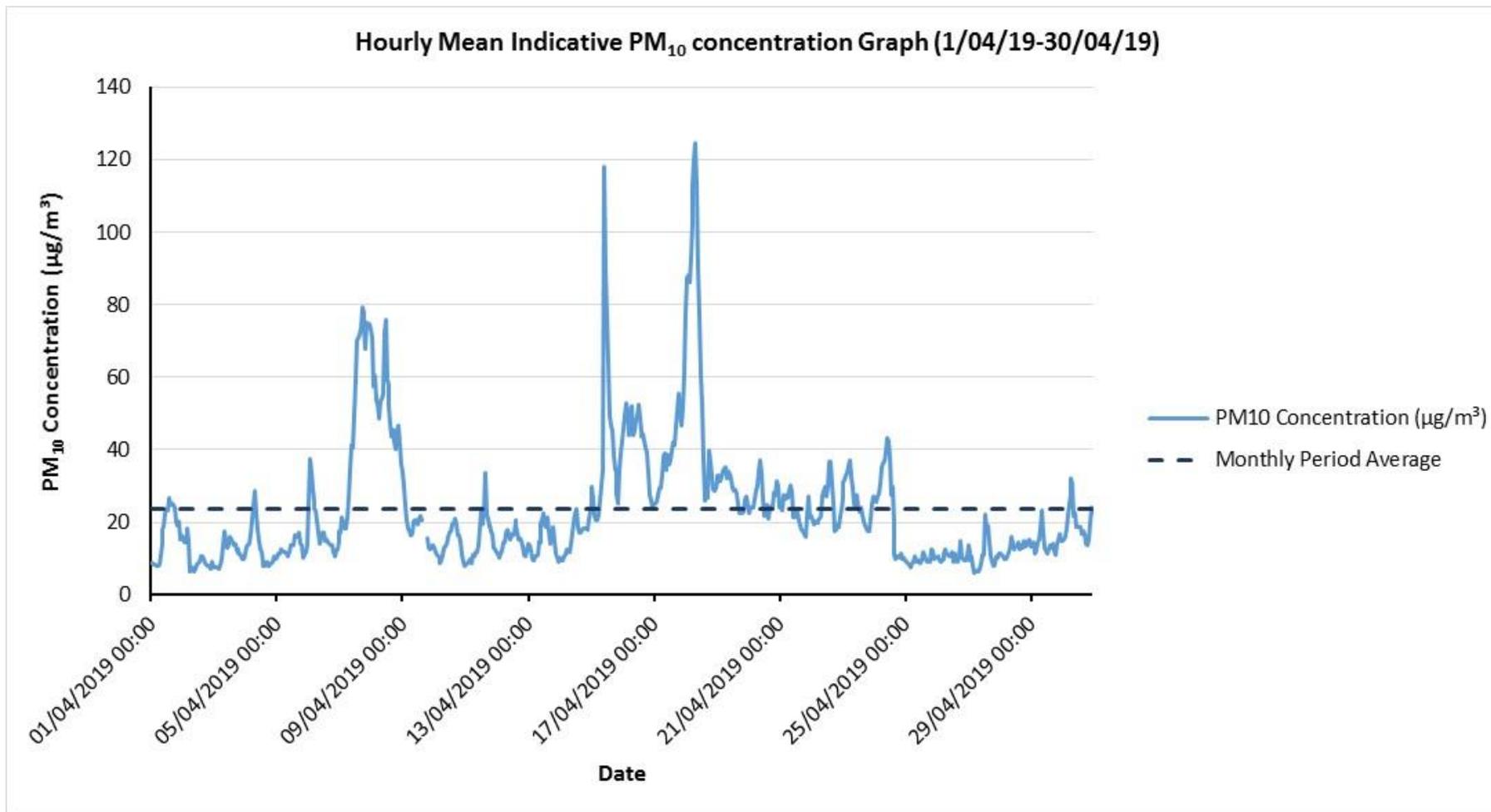


Figure 7: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 7 TNT 291 (April 2019)

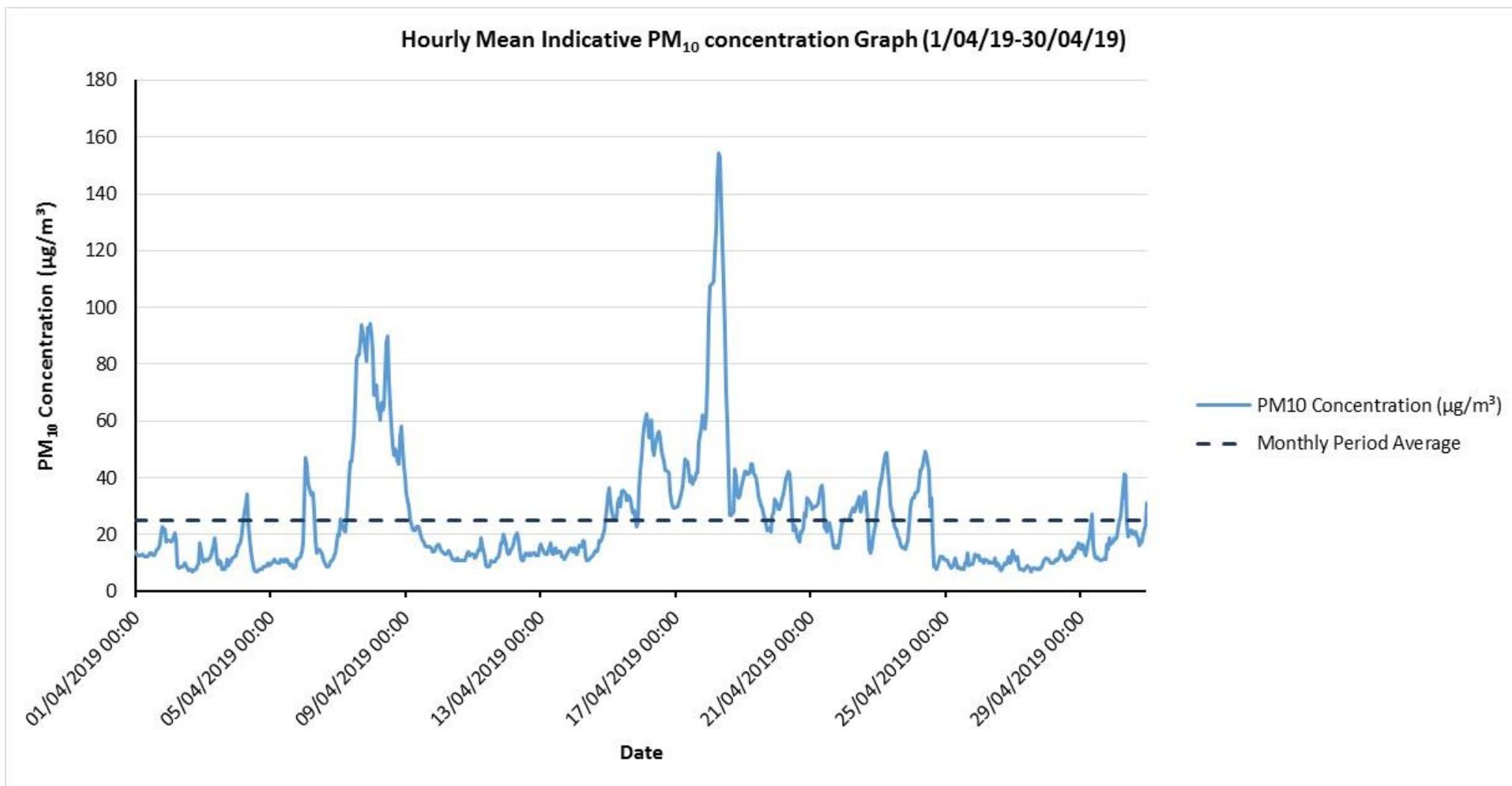


Figure 8: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 9TNT 297 (April 2019)

