

Air Quality and Dust Monitoring Monthly Report – September 2019

Birmingham City Council



Department for Transport

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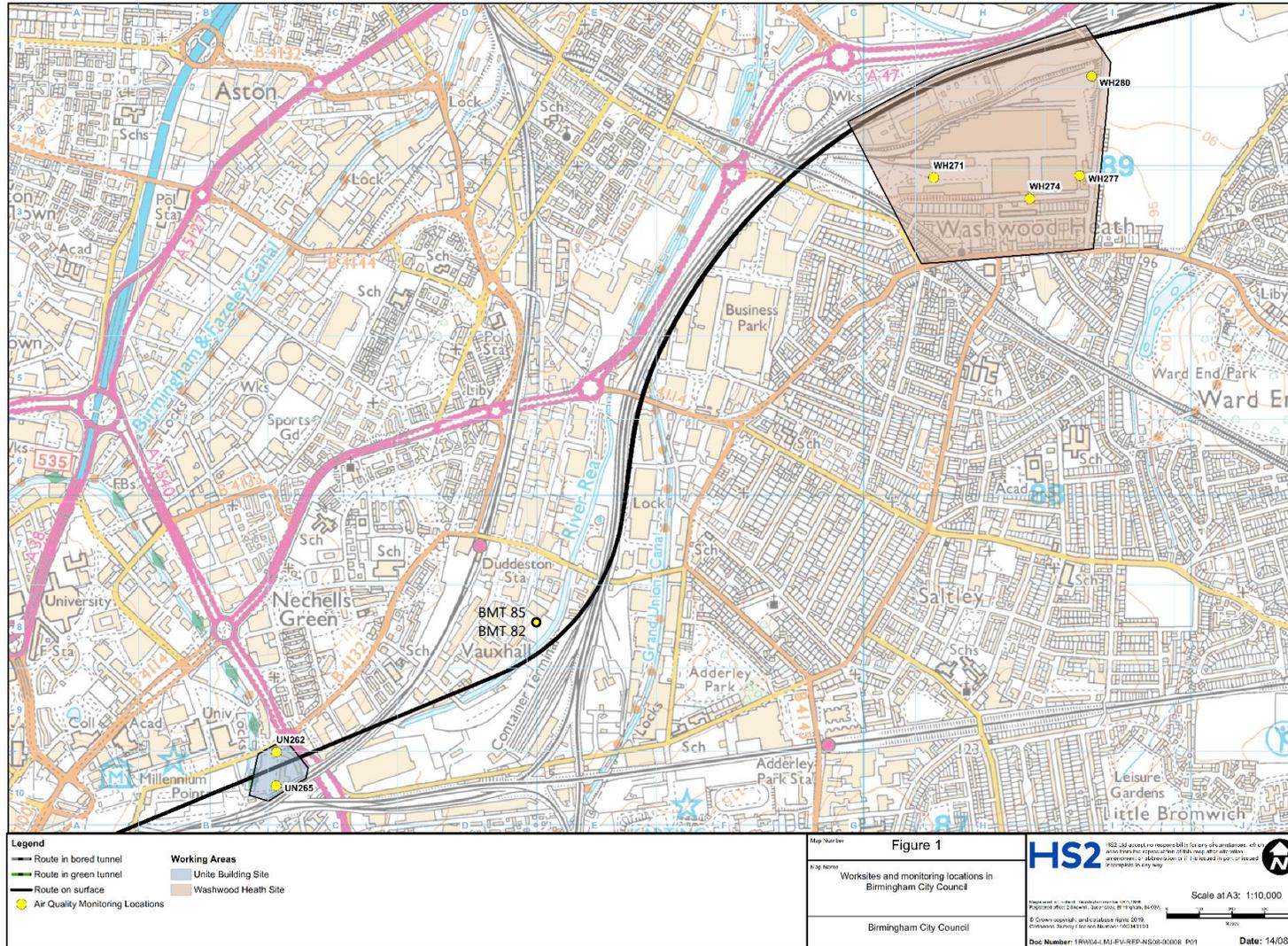
Monthly Summary

- 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 September 2019.
- 1.1.2 Figure 1 in Appendix A indicates the BCC worksites together with dust monitoring locations for September 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. Demolition works finished at Washwood Heath on the 20th September and at Unite on the 30th September 2019.
- 1.1.5 The current worksites (Washwood Heath 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.
- 1.1.6 Six (6) dust monitors (DM11s) were installed for the current phase of work, of which, four (4) were installed at the Washwood Heath site and two (2) at the Unite Building Site. The demolition works is underway at these sites, which were previously classified with a high dust risk rating (Washwood Heath) and a medium to high dust risk rating (Unite).
- 1.1.7 Two (2) dust monitors (Aeroqual Dust Sentry Monitors) were installed on the 5th September 2019. Of which, one was installed outside the Birmingham Museum Trust (BMT) site and the other inside the building (an artefact storage area). These are currently collecting baseline data as no construction works have commenced in this area.
- 1.1.8 Dust monitoring locations and results for September 2019 are presented in Appendix B, Table 1 together with line charts for the month from each dust monitor. All continuous dust monitoring is undertaken using indicative monitors. Despite being Environment Agency (MCERTS) certified, indicative monitors carry a higher level of uncertainty than reference monitors, and therefore cannot be strictly compared with Air Quality Standards for human health and the environment. The purpose of the monitoring undertaken is to ensure the effectiveness of the on-site mitigation.

- 1.1.9 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.
- 1.1.10 There were no (0) dust trigger alerts recorded during the monitoring period (September 2019).
- 1.1.11 Data capture for September monitoring data was below 90% for monitors 262 (Unite 1), 274 (Washwood Heath 4), and 280 (Washwood Heath 6). Data was lost at Unite 1 site due to the instrument losing power. Data was lost at Washwood Heath 4 and 6 because of instrument failure caused due to insufficient fuel. Monitors 265, 271, and 277 showed a data capture of greater than 90%. Monitors 82 and 85 showed a data capture of 100%.
- 1.1.12 No (0) complaints were received relating to air quality and dust during this monitoring period (September 2019).

Appendix A – Worksite and Dust Monitoring Locations

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



Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and September 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	9.5	1.7	27.0	0	100.0
HS2 4WH 274	410661,288971	Monitor secured on a stand	High	Yes	N/A	12.6	1.3	28.8	0	78.1
HS2 5WH 277	410508,288901	Monitor secured on a stand	High	Yes	N/A	15.5	7.2	165.0	0	100.0
HS2 6WH 280	410214,288965	Monitor secured on a stand	High	Yes	N/A	13.0	4.6	45.3	0	82.4
HS2 1 UNITE 262	408204,287222	Monitor secured on a stand	Medium to High	Yes	N/A	11.0	6.1	70.7	0	86.7
HS2 2 UNITE 265	408203,287119	Monitor secured on a stand	Medium to High	Yes	N/A	10.7	5.4	79.3	0	100.0
HS2 BMT 82	3890193,127124	Monitor outside the building	High	No (baseline)	N/A	4.92	0.49	36.6	0	100.0
HS2 BMT 85	3890165,127105	Monitor secured inside the building	High	No (baseline)	N/A	1.90	0	28.3	0	100.0

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

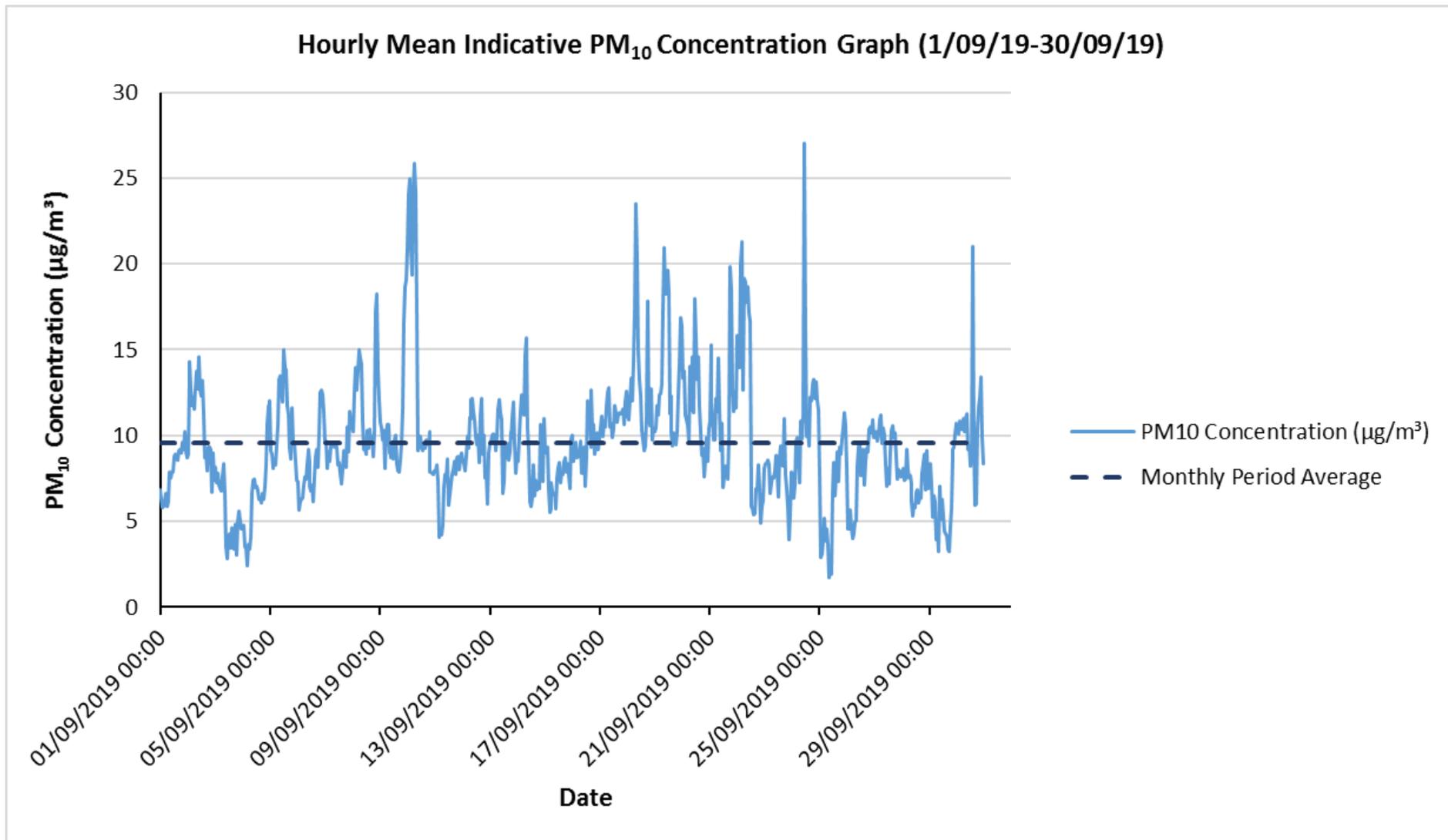


Figure 2: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 4WH 274 (September 2019)

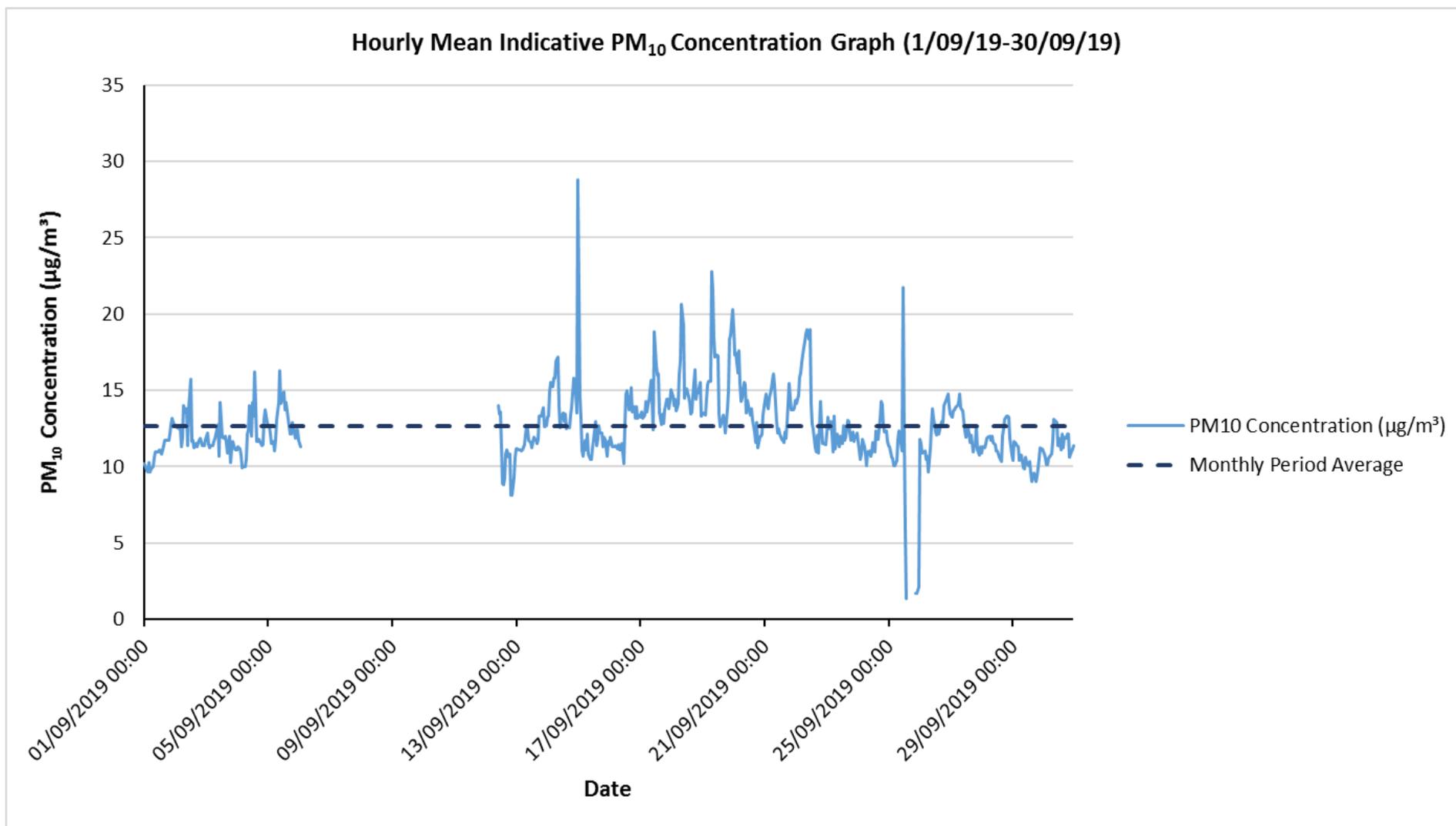


Figure 3: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 5WH 277 (September 2019)

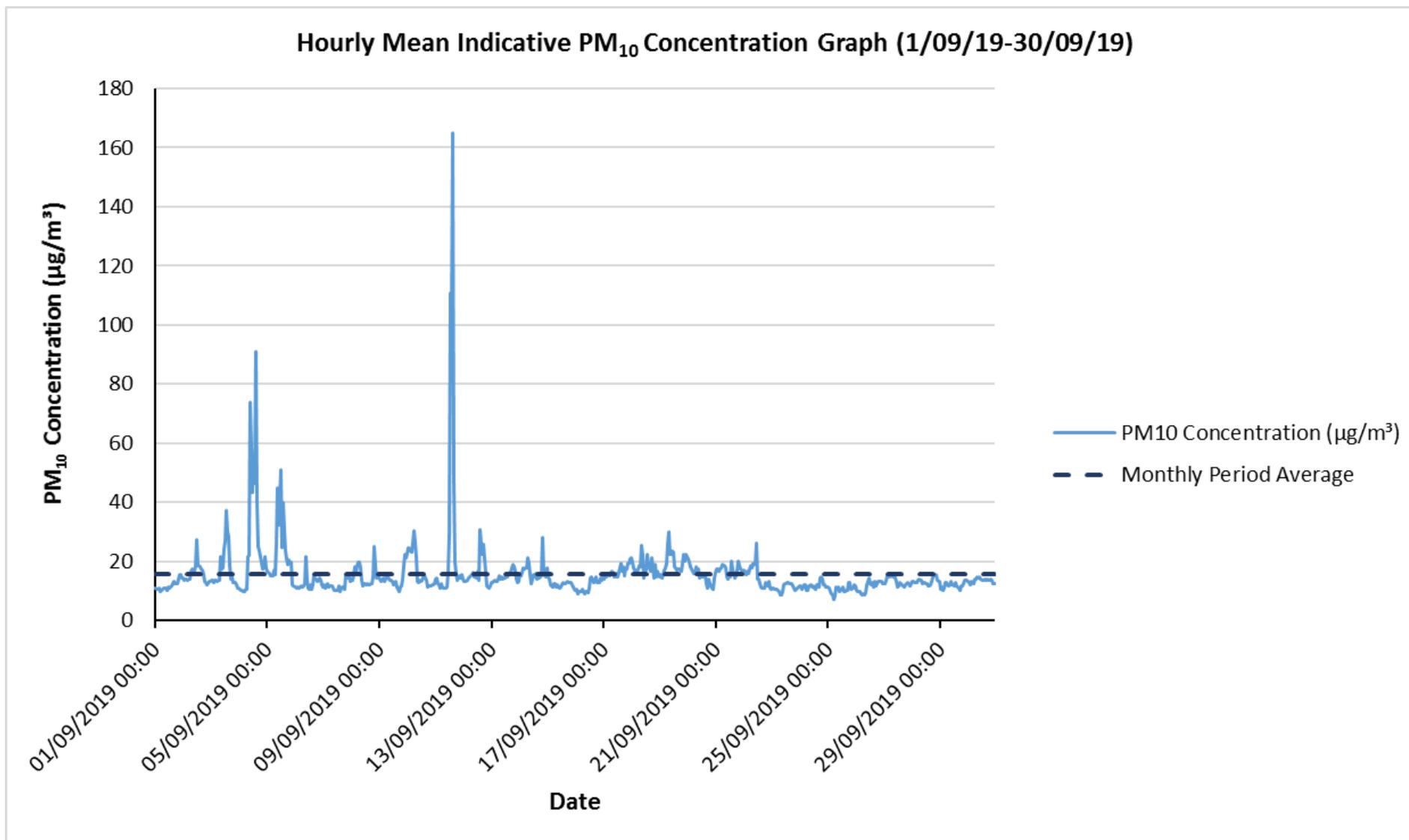


Figure 4: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 6WH 280 (September 2019)

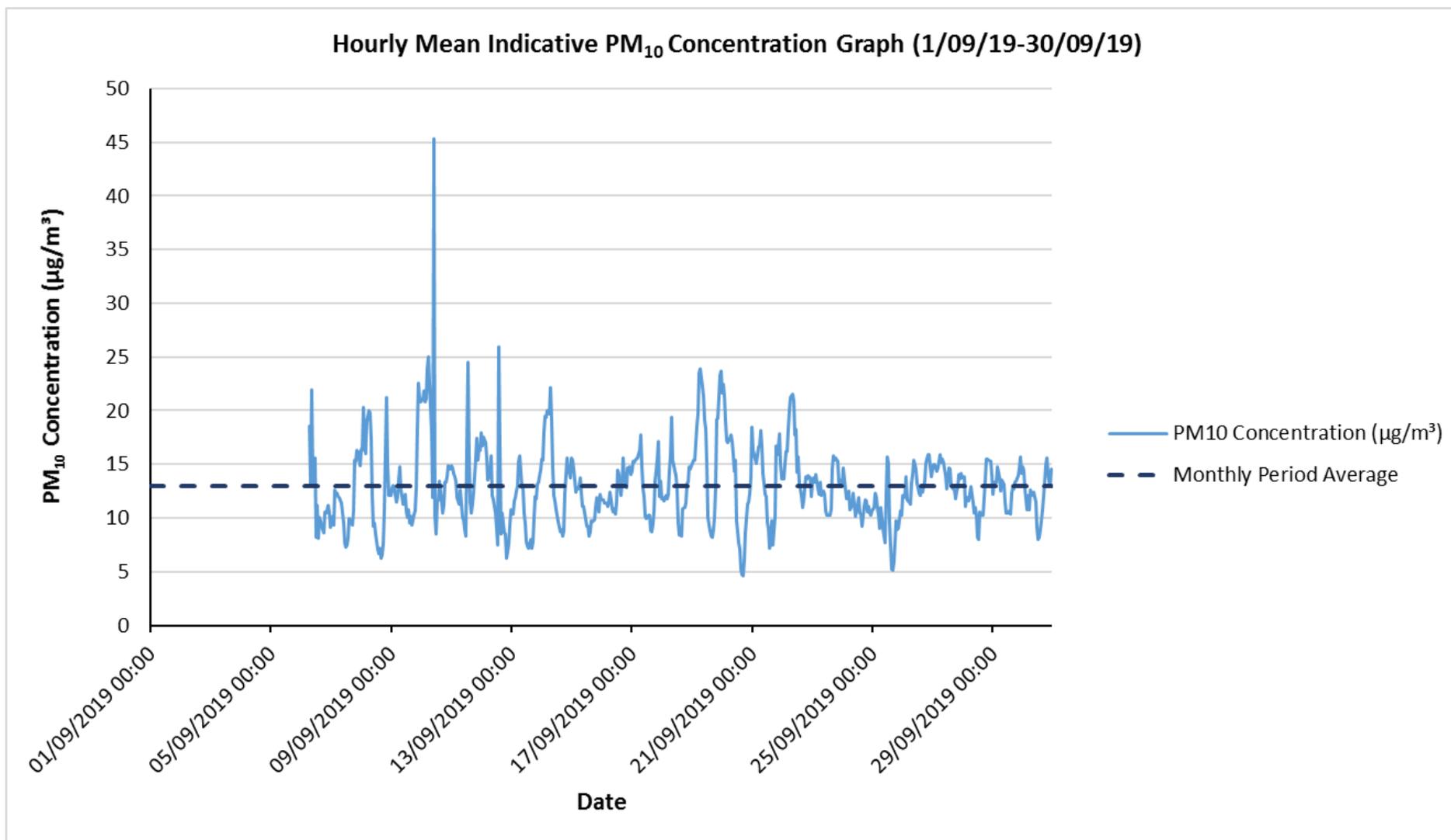


Figure 5: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 1 UNITE 262 (September 2019)

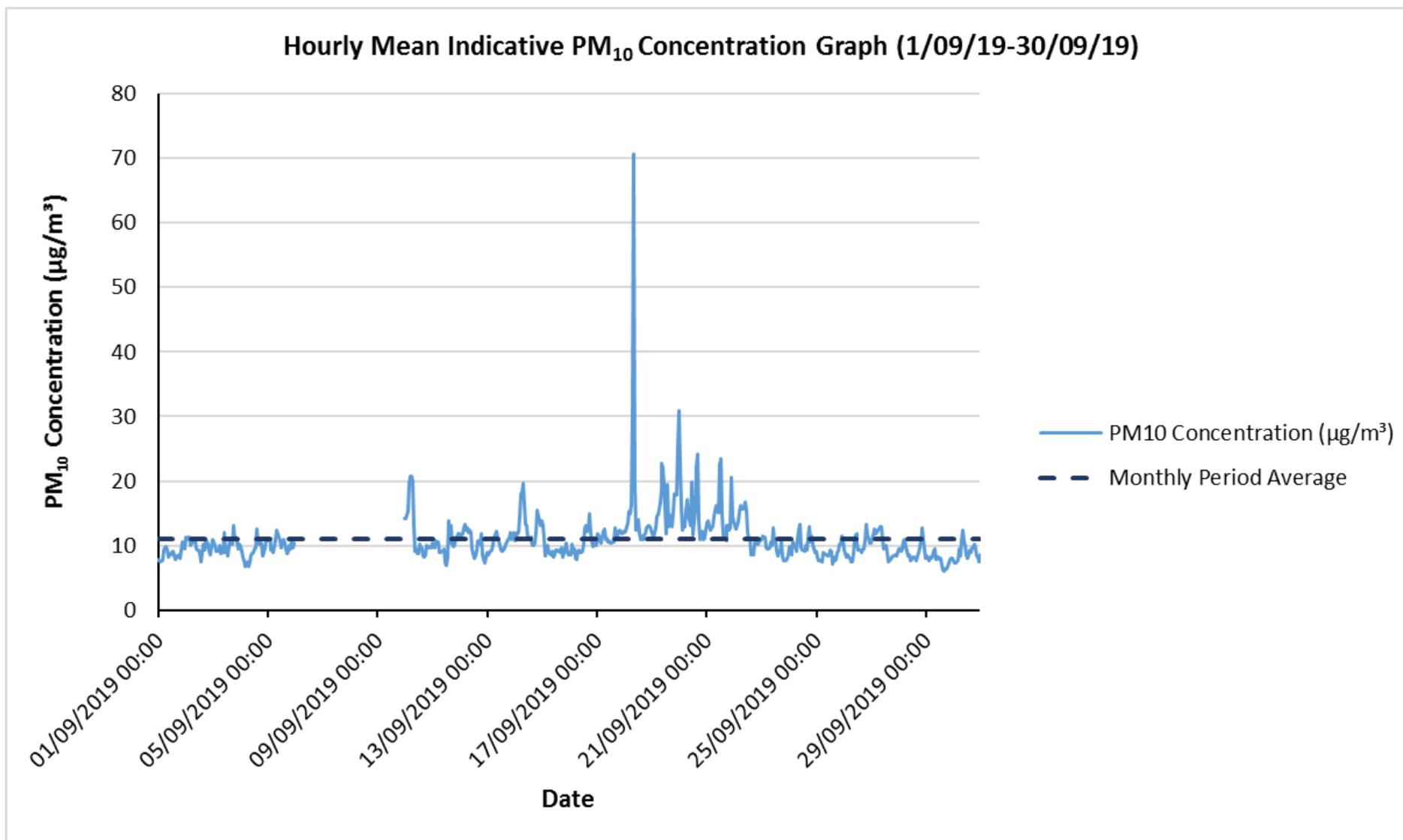


Figure 6: Construction dust hourly mean indicative PM₁₀ concentration for WSP HS2 2 UNITE 265 (September 2019)

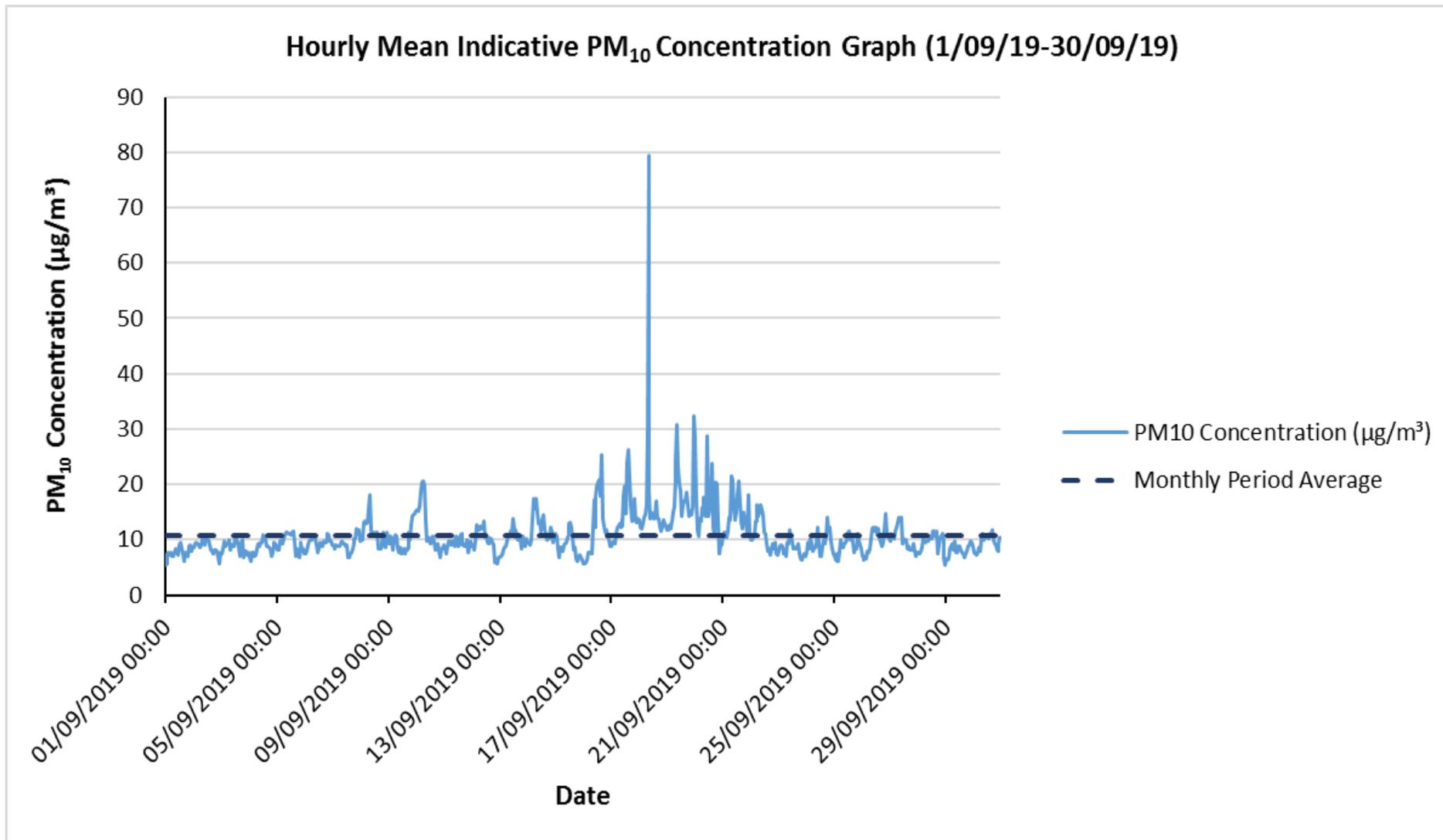


Figure 7: Construction dust hourly mean indicative PM₁₀ concentration for Dust s/n 1026 - #82 (September 2019)

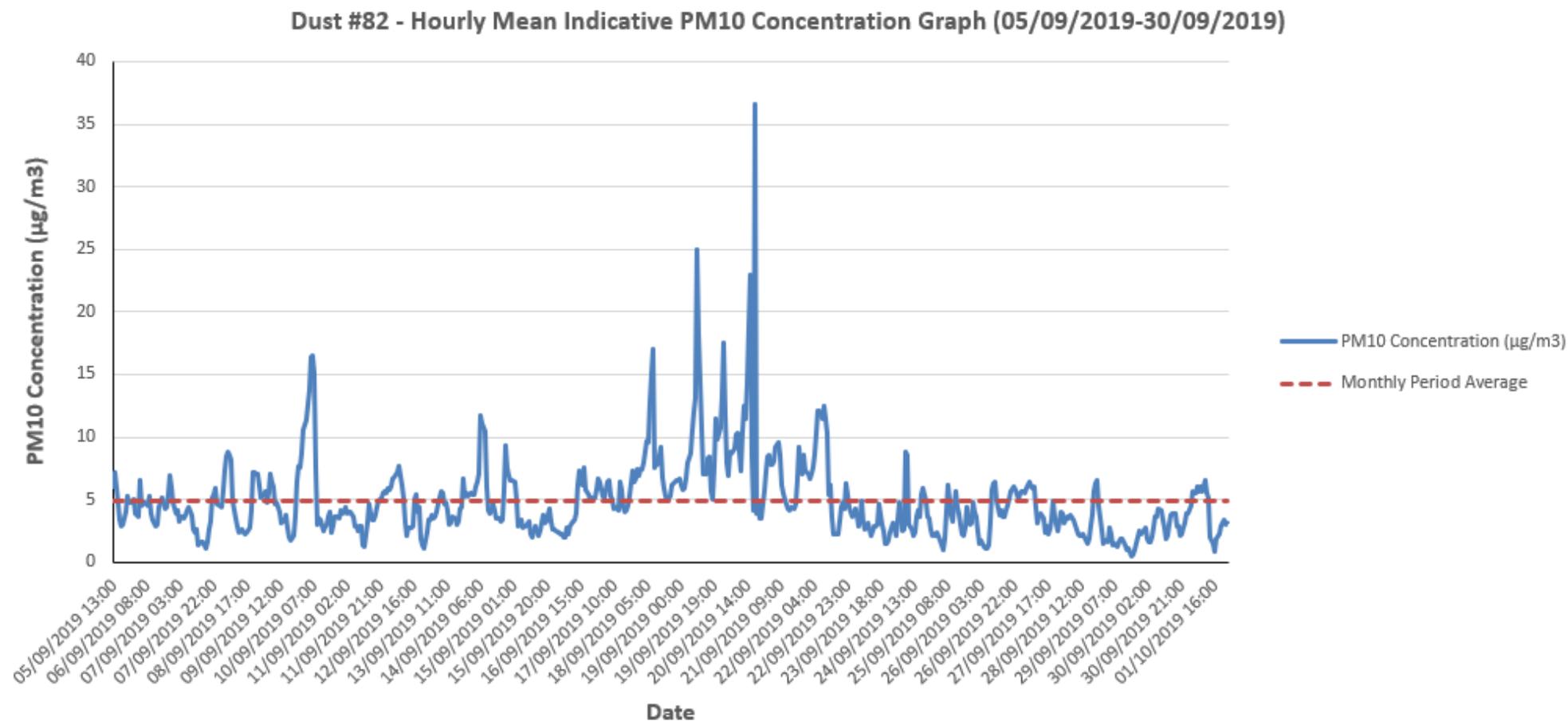


Figure 8: Construction dust hourly mean indicative PM₁₀ concentration for Dust s/n 1031 - #85 (September 2019)

