AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 20.10.2022
(BASED ON US-EPA AQI STANDARDS AND THE DAYALBAGH AQI COLOUR CODE)

Permissible Limits (24 Hour Mean): PM_{10} = 150; $PM_{2.5}$ = 35, all units are in $\mu g/m^3$ Sampling Duration = 24 hrs (9:00 AM to 9:00 AM)

Today: 19 -10-2022 to 20 -10-2022 from 9:00 a.m. to 9:00 a.m. Yesterday: 18 -10-2022 to 19 -10-2022 from 9:00 a.m. to 9:00 a.m.

LOCATION	DAYALBAGH (TIME WEIGHTED AVERAGE DATA)											SANJAY PLACE (ARITHMETIC MEAN DATA)										
	AQI				Meteorological Parameters							AQI				Meteorological Parameters						
	$PM_{2.5}$		PM_{10}		RH %	WS m/s	WD	T °C Max	T °C Min	SR W/m²	RF mm	$PM_{2.5}$		PM_{10}		RH %	WS m/s	WD	T °C Max	T °C Min	SR W/m²	RF mm
	Today	Yesterday	Today	Yesterday								Today	Yesterday	Today	Yesterday							
4 / 97	119	144	53	77	56	0.5	SSW	37.6	20.8	171	0	152	165	96	127	50	0.2	SSW	36.1	23	5.6*(106)	0
3 / 34	95	147	60	66	56	0.5	SSW	37.6	20.8	171	0											
Science Faculty	144	156	58	69	56	0.5	SSW	37.6	20.8	171	0											

Views of AQI Research Group: Particulate matter concentrations have decreased at all the sites of Dayalbagh probably due to change in Wind Direction, decrease in Relative Humidity and a marginal increase in Temperature. The Air Quality Index w.r.t. $PM_{2.5}$ has improved to the *Moderate* category at Prem Nagar, in the *Unhealthy for Sensitive Groups* category at Science Faculty and remains in *Unhealthy for Sensitive Groups* category at Vidyut Nagar, w.r.t. PM_{10} it remains in the *Moderate* category at all sites of Dayalbagh.

The pollutant concentrations have also decreased at Sanjay Place, though the Air Quality index still remains in the *Unhealthy for All* category w.r.t. $PM_{2.5}$, but has improved to the *Moderate* category w.r.t. PM_{10}. *SR value recorded at Sanjay Place appears to be erroneous. Value in parentheses is the SR value of Avas Vikas, Bodla, Agra.*

Good 0 - 50	Moderate 51 - 100	Unhealthy for Sensitive Groups 101 - 150	Unhealthy for All 151 - 200	Very Unhealthy for All 201 - 300	Hazardous for All 301 - 400	Hazardous for All 401 - 500

NOTE: 1 A continuing study conducted as part of **Dayalbagh Sigma Six Qualities and Values Model** implementation.

2 DEI is using United States Environmental Protection Agency (USEPA) methodology and online calculators to calculate AQI. For fair comparison with UPPCB Sanjay Place Weather Station readings, their $PM_{2.5}$ concentration readings are fed in USEPA online calculator for AQI calculation.

3 Formula for AQI calculation for a Pollutant –

$$I = \frac{I_{high} - I_{low}}{C_{high} - C_{low}} * (C - C_{low}) + I_{low}$$

where: I = Air Quality Index; C = Pollutant Concentration ($PM_{2.5}$); C_{low} = Concentration Breakpoint ≤C; C_{high} = Concentration Breakpoint ≥C; I_{low} = Index Break point corresponding to C_{low}; I_{high} = Index Breakpoint corresponding to C_{high}; *Multiplication Sign

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