AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 24.11.2022
(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: 23-11-2022 to 24-11-2022 from 9:00 a.m. to 9:00 a.m. Yesterday: 22-11-2022 to 23-11-2022 from 9:00 a.m. to 9:00 a.m.

LOCATION	DAYALBAGH (TIME WEIGHTED AVERAGE DATA)												LOCATION	SANJAY PLACE AND AVAS VIKAS (ARITHMETIC MEAN DATA)											
	AQI				Meteorological Parameters									AQI				Meteorological Parameters							
	$PM_{2.5}$		PM_{10}					T ˚C						$PM_{2.5}$		PM_{10}					T ˚C				
	Today	Yesterday	Today	Yesterday	RH %	WS m/s	WD	Max	Min	SR W/m²	RF mm			Today	Yesterday	Today	Yesterday	RH %	WS m/s	WD	Max	Min	SR W/m²	RF mm	
4 / 97	97	107	50	57	57	0.8	WNW	28.4	11.7	138	0		Sanjay Place	110	124	78	86	47	2.3	WNW	27	14	151	0	
3 / 34	95	112	44	50	57	0.8	WNW	28.4	11.7	138	0		Avas Vikas	137	149	69	70	54	0.7	ENE	28	12	81	0	
Science Faculty	112	139	47	54	57	0.8	WNW	28.4	11.7	138	0														

Views of AQI Research Group: Particulate matter concentrations have further decreased at all sites of Dayalbagh probably due to unstable atmosphere favouring dispersion of pollutants. The Air Quality Index has improved to the Moderate category at Vidyut Nagar and Prem Nagar while it remains in the *Unhealthy for Sensitive Groups* category at Science Faculty w.r.t. $PM_{2.5}$ and has improved to the *Good* category w.r.t. PM_{10} at all sites of Dayalbagh.

At Sanjay Place and Avas Vikas, Bodla also concentrations of Particulate matter have decreased, the Air Quality Index remains in the *Unhealthy for Sensitive Groups* category w.r.t $PM_{2.5}$ and in the *Moderate* category w.r.t. PM_{10}.

Good 0-50	Mode rate 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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