AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 23.12.2022
(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 µg/m³   Sampling Duration = 24 hrs (9:00 AM to 9:00 AM)

Today: 22-12-2022 to 23-12-2022 from 9:00 a.m. to 9:00 a.m.   **Yesterday:** 21-12-2022 to 22-12-2022 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}		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	149 (11%↓)	154	70 (9%↓)	74	76	0.4	WNW	25.0	8.6	106	0	Sanjay Place	153 (5%↓)	155	85 (6%↓)	89	71	0.8	ENE	23.2	9.7	23	0
3 / 34	134 (7%↓)	144	59 (6%↓)	61	76	0.4	WNW	25.0	8.6	106	0	Avas Vikas	154*	160*	76*	74	84	0.7	E	23	9.6	57	0
Science Faculty	142 (14%↓)	154	58 (1%↓)	59	76	0.4	WNW	25.0	8.6	106	0												

Views of AQI Research Group: Concentrations of Particulate matter have decreased at all sites of Dayalbagh. The Air Quality Index w.r.t. $PM_{2.5}$ has improved to Unhealthy for Sensitive Groups, while w.r.t. PM_{10} it remains in the *Moderate* category at all sites of Dayalbagh.
Average Visibility yesterday was 1.6 Kms, it decreased to 1.5 Kms today. Around 8:00 am today it dropped to 0.15 Km.
*At Avas Vikas, Bodla data for $PM_{2.5}$ was available after 3:00 pm while for PM_{10} it was not available between 1:00-7:00 pm yesterday. Concentrations of Particulate matter have marginally decreased at Sanjay Place. The Air Quality Index w.r.t $PM_{2.5}$ at both these sites remains in the *Unhealthy for All* category while w.r.t PM_{10} it remains in the *Moderate* category.

Values in parentheses indicate the percentage change in the pollutant concentrations with respect to yesterday. ↑indicates increase while ↓ indicates decrease in pollutant concentrations. Percentage change has not been shown w.r.t. AQI values as the breakpoints for the different categories are not evenly distributed.

Mutual discussion relevant to AQI & WQI on daily basis should be useful in deciding the treatment required in a cost-efficient manner.

Perused By Way of Information Only,
Subject To Legalise/Legalese/"Laws of the Land".

Friday, 23-12-2022, 05:40 PM
Received, Friday, 23-12-2022, 01:25 PM

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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