AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 1.12.2022

(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/m^3 Sampling Duration = 24 hrs (9:00 AM to 9:00 AM)

Today: 30-11-2022 to 1-12-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 29-11-2022 to 30-11-2022 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/m^2	RF mm		Today	Yesterday	Today	Yesterday	RH %	WS m/s	WD	Max	Min	SR W/m^2	RF mm
4 / 97	158 (6%↑)	156	79 (6%↓)	83	68	0.4	WNW	28.4	12.4	98	0	Sanjay Place	177 (0%)	177	130 (13%↓)	146	61	1.0	NW	26.9	14.9	113	0
3 / 34	149 (0%)	149	63 (1%↓)	63	68	0.4	WNW	28.4	12.4	98	0	Avas Vikas	124 (22%↓)	149	60 (23%↓)	70	71	0.5	NE	27.4	13.1	64	0
Science Faculty	158 (3%↑)	157	68 (7%↑)	72	68	0.4	WNW	28.4	12.4	98	0												

Views of AQI Research Group: Concentrations of $PM_{2.5}$ have marginally changed at all sites of Dayalbagh. The Air Quality Index w.r.t. $PM_{2.5}$ remains in the *Unhealthy for Sensitive Groups* category at Prem Nagar and in the *Unhealthy for All* category at Vidyut Nagar and Science Faculty while w.r.t. PM_{10} it is in the *Moderate* category at all sites of Dayalbagh.

At Sanjay Place, the Air Quality Index w.r.t $PM_{2.5}$ remains in the *Unhealthy for All* category while w.r.t. PM_{10} it remains in the *Unhealthy for Sensitive Groups* category. At Avas Vikas, Bodla the Air Quality Index w.r.t. $PM_{2.5}$ is in the *Unhealthy for Sensitive Groups* category and in the *Moderate* category w.r.t. PM_{10}.

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.

COLOR CODE:- 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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