AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 16.11.2022
(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: 15-11-2022 to 16-11-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 14-11-2022 to 15-11-2022 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	152	139	72	64	65	0.3	WSW	34.3	16.0	120	0	Sanjay Place		160	147	112	62	56	0.3	NNE	32.0	19.1	130	0
3 / 34	153	122	69	56	65	0.3	WSW	34.3	16.0	120	0	Avas Vikas		164	154	88	73	65	0.4	ENE	32.0	17.2	74	0
Science Faculty	154	149	69	63	65	0.3	WSW	34.3	16.0	120	0													

Views of AQI Research Group: Concentrations of Particulate matter have increased at all sites of Dayalbagh due to change in Wind Direction and a decrease in intensity of Solar Radiation. The Air Quality Index w.r.t. $PM_{2.5}$ has changed to the *Unhealthy for All* category, however w.r.t. PM_{10} though the AQI remains in the *Moderate* category, the AQI value has increased at all sites of Dayalbagh.

At Sanjay Place and Avas Vikas, Bodla also concentrations of Particulate matter have increased. At Sanjay Place, the Air Quality Index w.r.t $PM_{2.5}$ has changed to the *Unhealthy for All* category, but w.r.t. PM_{10} it has changed to the *Unhealthy for Sensitive Groups* category from the *Moderate* category. Though the $PM_{2.5}$ and PM_{10} Air Quality Index values at Avas Vikas, Bodla remain in the *Unhealthy for All* and *Moderate* categories, respectively, both AQI values have increased.

Since population density of Avas Vikas, Bodla w.r.t Dayalbagh is lower, although there is greater correspondence in terms of AQI trends with Avas Vikas, Bodla, rather than Sanjay Place (which is worse off than Dayalbagh, in terms of population density and Industrial & Business activities, with practically no agriculture activity there to redeem their AQI).

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

Wednesday, 16-11-2022, 04:31 PM
Received, Wednesday, 16-11-2022, 01:22 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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