Radhasoami Dayal Ki Daya Radhasoami Sahai

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 21.8.2022

(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)

	Date	DAYALBAGH (TIME WEIGHTED AVERAGE DATA)									Date	SANJAY PLACE (ARITHMETIC MEAN DATA)								
		Air Quality Index		Meteorological Parameters								AQI		Meteorological Parameters						
	Today: August 21 – 20 Yesterday August 20 – 19	$PM_{2.5}$	PM_{10}	RH %	WS m/s	WD	T °C Max	T °C Min	SR W/m^2	RF mm	Today: August 21 – 20 Yesterday August 20 – 19	$PM_{2.5}$	PM_{10}	RH %	WS m/s	WD	T °C Max	T °C Min	SR W/m^2	RF mm
4 / 97	Today	66	30	86	0.9	S	31.2	25.2	94	17.5	Today	80	52	80	1.8	SE	31.3	28.6	97	17.5
	Yesterday	25	13	76	1.1	S	37.3	26.3	151	6.5										
3 / 34	Today	80	39	86	0.9	S	31.2	25.2	94	17.5										
	Yesterday	42	15	76	1.1	S	37.3	26.3	151	6.5	Yesterday	59	39	68	2.7	SSE	37.4	29.8	197	01
Science Faculty	Today	74	28	86	0.9	S	31.2	25.2	94	17.5										
	Yesterday	46	15	76	1.1	S	37.3	26.3	151	6.5										

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

Views of AQI Research Group: In comparison to yesterday, concentrations of both $PM_{2.5}$ and PM_{10} have increased at all locations of Dayalbagh. The Air Quality Index w.r.t. $PM_{2.5}$ has changed from *Good* to *Moderate* category while w.r.t. PM_{10}, it remains in the *Good* category at all three locations of Dayalbagh.

At Sanjay Place also, the concentrations of both $PM_{2.5}$ and PM_{10} have increased. The Air Quality Index w.r.t. $PM_{2.5}$ remains in the *Moderate* category, while w.r.t. PM_{10} it has changed from *Good* to *Moderate* category.

Despite rainfall, this increase may be attributed to increase in Relative Humidity that might have favoured coagulation and agglomeration of particulate matter in the atmosphere.

[illegible] 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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