Radhasoami Dayal Ki Daya Radhasoami Sahai

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 2.9.2022
(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 Today: September 2 – 1 Yesterday September 1 – August 31		DAYALBAGH (TIME WEIGHTED AVERAGE DATA)									Date Today: September 2 – 1 Yesterday September 1 – August 31	SANJAY PLACE (ARITHMETIC MEAN DATA)								
		Air Quality Index		Meteorological Parameters								AQI		Meteorological Parameters						
		PM$_{2.5}$	PM$_{10}$	RH %	WS m/s	WD	T °C Max	T °C Min	SR W/m^2	RF mm		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	38	22	72	0.9	E	41.3	27.5	122	Trace	Today	74	47	70	1.9	NE	39.1	28.6	140	0.5
	Yesterday	46	35	66	0.7	NNE	41.7	29.1	191	00										
3 / 34	Today	61	23	72	0.9	E	41.3	27.5	122	Trace	Yesterday	97	69	64	1.2	E	39	30.7	204	00
	Yesterday	66	30	66	0.7	NNE	41.7	29.1	191	00										
Science Faculty	Today	57	20	72	0.9	E	41.3	27.5	122	Trace										
	Yesterday	63	30	66	0.7	NNE	41.7	29.1	191	00										

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

Views of AQI Research Group: At Dayalbagh sites, PM$_{2.5}$ and PM$_{10}$ concentrations have likely decreased due to a decrease in solar radiation intensity, which may have decreased the production of photochemically produced secondary particulate matter while a change in wind direction and a slight increase in wind speed may have helped to disperse pollutants. Although, the Air Quality Index has improved, it still falls in the *Good* category w.r.t. PM$_{2.5}$ at Vidyut Nagar, the *Moderate* category at Science Faculty and Prem Nagar, and in Good category w.r.t. PM$_{10}$ at all three Dayalbagh locations.

The concentrations of PM$_{2.5}$ and PM$_{10}$ have decreased at Sanjay Place also. The Air Quality Index has improved to the *Good* category w.r.t. PM$_{10}$, although it still falls in the *Moderate* category w.r.t. PM$_{2.5}$.

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

Communicated by Dr. Anita Lakhani, Professor, Department of Chemistry, Faculty of Science, Dayalbagh Educational Institute, Dayalbagh, Agra.