AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 31.10.2022

(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 -10-2022 to 31 -10-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 29 -10-2022 to 30 -10-2022 from 9:00 a.m. to 9:00 a.m.

LOCATION	DAYALBAGH (TIME WEIGHTED AVERAGE DATA)											SANJAY PLACE (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	168	162	124	103	65	0.4	W	34.5	18.0	114	0	NA	176	NA	168	NA	NA	NA	NA	NA	NA	NA
3 / 34	171	163	125	105	65	0.4	W	34.5	18.0	114	0											
Science Faculty	180	176	124	117	65	0.4	W	34.5	18.0	114	0											

Views of AQI Research Group: Concentrations of particulate matter have increased at all sites of Dayalbagh probably due to stagnant meteorological conditions and change in Wind Direction. 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 all sites of Dayalbagh.

No data is available for both Sanjay Place and Avas Vikas, Bodla, Agra.

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

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