AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 3.11.2022 (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: 2-11-2022 to 3-11-2022 from 9:00 a.m. to 9:00 a.m. Yesterday: 2-11-2022 to 1-11-2022 from 9:00 a.m. to 9:00 a.m.

L		A		YALBAGH TED AVERAGE DATA) Meteorological Parameters							SANJAY (ARITHMETIC AQI											
C A T	PM _{2.5}		PM ₁₀					0	T C			PM _{2.5}		PM ₁₀)°	7	İ	
O N	Today	Yesterday	Today	Yesterday	RH %	WS m/s	WD	Max	Min	SR W/ m ²	RF mm	Today	Yesterday	Today	Yesterday	R H %	WS m/s	W D	Max	Min	SR W/ m²	R F m
4 / 97	137	165	71	93	59	0.7	WN W	35.1	19.6	134	0	181	166	176	168	50	1.1	NW	35.3	22.4	156	
3 / 34	156	174	68	91	59	0.7	WN W	35.1	19.6	134	0											0
Science Faculty	164	193	75	104	59	0.7	WN W	35.1	19.6	134	0											

Views of AQI Research Group: Hourly inspection of the data revealed that concentrations of particulate matter decreased substantially yesterday during the daytime due to intense Solar Radiation and change in Wind Direction. However, increase in Relative Humidity during the night-time followed by lower Solar Radiation since early morning today raised the particulate matter at all sites of Dayalbagh. The Air Quality Index w.r.t. PM_{2.5} improved to the *Unhealthy for Sensitive Groups* category at Vidyut Nagar but at Prem Nagar and Science Faculty it remains in the *Unhealthy for All* category, while, w.r.t. PM₁₀ it is in the *Moderate* category at all sites of Dayalbagh.

At Sanjay Place concentrations of particulate matter have marginally changed, but the Air Quality Index w.r.t. to both PM_{2.5} and PM₁₀ remains in the *Unhealthy for All* category.

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 -

$$I = \frac{I_{\rm high} - I_{\rm low}}{C_{\rm high} - C_{\rm low}} * (C - C_{low}) + I_{low}$$

where: I = Air Quality Index; C = Pollutant Concentration (PM_{2.5}); C_{low} = Concentration Breakpoint \leq C; C_{high} = Concentration Breakpoint \geq C; L_{low} = Index Breakpoint corresponding to C_{low} ; L_{high} = Index Breakpoint corresponding to C_{high} ; *Multiplication Sign