

**Ambient Air Quality monitoring data during Deepawali festival (28.10.2021 to 11.11.2021)**

**Data / Observations:**

Name of the location : JICA BUILDING, FOREST SECRETARIAT, DEORALI. (GANGTOK)										
Date	Regulatory parameters							Proposed New Parameters		
	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>	Metals in PM <sub>10</sub>			Metals /Elements in PM <sub>2.5</sub>		
	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	Pb	Ni	As	Al	Ba	Fe
					(µg/m <sup>3</sup> )	(ng/m <sup>3</sup> )	(ng/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )
28.10.2021	42.31	26.33	0.7	9.46	#	#	#	#	#	#
29.10.2021	53.13	30.77	1.1	11.29	#	#	#	#	#	#
30.10.2021	46.91	*	4.2	8.54	#	#	#	#	#	#
31.10.2021	63.72	*	1.2	7	#	#	#	#	#	#
01.11.2021	59.69	*	2.1	7.69	#	#	#	#	#	#
02.11.2021	68.24	*	1.3	7.14	#	#	#	#	#	#
03.11.2021	62.43	*	2.5	7.41	#	#	#	#	#	#
04.11.2021	55.93	*	1.5	5.49	#	#	#	#	#	#
05.11.2021	74.74	*	1.4	6.42	#	#	#	#	#	#
06.11.2021	50.45	*	2.7	4.36	#	#	#	#	#	#
07.11.2021	52.81	*	1.8	7.51	#	#	#	#	#	#
08.11.2021	47.61	*	1.4	10.31	#	#	#	#	#	#
09.11.2021	49.83	*	1.8	9.02	#	#	#	#	#	#
10.11.2021	45.75	*	0.8	8.75	#	#	#	#	#	#
11.11.2021	45.72	*	3.5	10.12	#	#	#	#	#	#

All values (24 hourly Avg.) are in µgm/m<sup>3</sup>.

**Interpretation of Ambient Air Quality Data/Results:**

Reports show that all the pollutant levels are within the prescribed limits (24 hrs) as per the guidelines given by CPCB, MoEF&CC, Govt. of India.

**NOTE:** \* Due to technical fault in PM<sub>2.5</sub> sampler monitoring after dated 30.10.21 could not be conducted.

# Due to unavailability of the facility for monitoring of heavy metals in a control lab the monitoring of parameters viz PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>2</sub> was conducted at only one location i.e. M.G Marg (Gangtok) .

**Ambient Air Quality Monitoring data during Deepawali festival(28.10.2021 to 11.11.2021)**

**Data / Observations:**

Name of location: M.G.MARG, GANGTOK, EAST-SIKKIM													
DATE	Regulatory parameters							New parameters					
	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	Metals in PM <sub>10</sub>			Metals / Elements in PM <sub>2.5</sub>					
	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	Pb	Ni	As	Pb	Ni	Al	Ba	Fe	Sr
				(µg/m <sup>3</sup> )	(ng/m <sup>3</sup> )	(ng/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )
28.10.2021	4.9	3.73	65.93	30.43	---	---	---	-	-	1.65	BDL	1.08	-
29.10.2021	1.8	1.71	68.33	20	BDL	4.23	1.6	-	-	2.07	0.1	1.66	-
30.10.2021	2.8	12.11	83.09	30.3	BDL	2.63	2.06	-	-	0.83	BDL	1.11	-
31.10.2021	1.9	10.88	77.7	26.09	BDL	BDL	2.7	-	-	1.65	BDL	1.35	-
01.11.2021	4.8	8.75	69.1	34.14	BDL	BDL	2.53	-	-	1.31	BDL	1.03	-
02.11.2021	2	14.73	71.68	34.78	0.01	8.5	2.4	-	-	2.11	0.1	1.4	-
03.11.2021	3.8	17.13	80.28	30.76	BDL	BDL	2.36	-	-	2.58	0.21	0.93	-
04.11.2021	11.1	11.52	78.17	27.27	0.01	BDL	2.83	-	-	1.34	0.21	0.88	-
05.11.2021	1.9	8.8	73	37.73	0.01	BDL	1.9	-	-	2.19	1.56	1.21	-
06.11.2021	2.7	16.43	64.32	23.8	0.01	4.46	2.8	-	-	1.68	0.21	1.49	-
07.11.2021	5.3	9.5	71.96	23.8	BDL	2.43	4.16	-	-	1.73	1.04	0.98	-
08.11.2021	3.7	5.71	73.19	28.57	0.01	5.06	3.53	-	-	2.23	0.1	0.9	-
09.11.2021	3.8	4.8	70.83	24.34	BDL	12.5	1.73	-	-	2.32	1.35	1.17	-
10.11.2021	5.6	4.54	75.87	31.41	BDL	5.1	4.13	-	-	1.69	BDL	1.66	-
11.11.2021	2.4	17.85	67.74	25.95	BDL	2.06	4.6	-	-	1.2	BDL	1.03	-
<b>All values in 24 hourly Avg.</b>													

**Interpretation of Ambient Air Quality Data/Results:**

Report shows that all the pollutant levels are within the standards as per the guidelines given by Central Pollution Control Board, MoEF&CC, Government of India.

## **Format of Report: Deepawali Monitoring 2021**

**City: Central Park Premises, Namchi, South-Sikkim.**

**Latitude: 27.1659° N Longitude: 88.3622° E**

### **NOISE LEVEL DURING DEEPAWALI FESTIVAL-2021.**

Location Time Duration	Pre-Deepawali (29.10.2021)			Deepawali Day (04.11.2021)		
	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)
18:00 to 19:00 Hr	50.5	67.2	59	27.3	65.4	55
19:00 to 20:00 Hr	48.2	87.7	77	26.9	78.6	61
20:00 to 21:00 Hr	37.1	95.8	80	26.9	49.6	38
21:00 to 22:00 Hr	43.6	95.8	81	26.9	60.3	48
22:00 to 23:00 Hr	41.6	86.5	77	27.3	53.2	48
23:00 to 24:00 Hr	27.2	75.1	59	26.9	59.3	43

### **National Standards for Commercial Area:**

Location	Category of Area/zone	Limits in dB(A) Leq*	
		National Standards	
		Day	Night
Central Park Premises, Namchi, South-Sikkim.	Commercial Area	65	55

**Day time shall mean from 6am to 10pm.**

**Night time shall mean from 10pm to 6am.**

**Note:** The value of Leq is slightly high due to traffic movement/celebratory music in homes and loud music (Deepawali Programme) during Deepawali festival at Central Park, Namchi. Firecrackers were totally banned in the entire state (appeal for ban on firecrackers was published in the Newspaper, broadcasting in the FM radio and displayed banner regarding ban on firecrackers by the Board)

*Submitted by,*

**Yanuraj Basnet, JLA**  
SPCB-Sikkim

## Format of Report: Deepawali Monitoring 2021

City: Deorali, Forest Secretariat, Gangtok, East-Sikkim.

Latitude: 27.3183° N Longitude: 88.6063° E

### NOISE LEVEL DURING DEEPAWALI FESTIVAL-2021

Location	Pre-Deepawali (29.10.2021)			Deepawali Day (04.11.2021)		
	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)
18:00 to 19:00 Hr	50.5	67.2	59	38.7	66.7	52
19:00 to 20:00 Hr	45.8	69.6	59	45.8	71.2	60
20:00 to 21:00 Hr	48	69.6	59	48.5	72.9	61
21:00 to 22:00 Hr	40.8	74.2	63	47.8	72.6	62
22:00 to 23:00 Hr	34.4	75.6	59	48	75.3	61
23:00 to 24:00 Hr	36.2	73.9	60	42	72.8	61

#### National Standards for Commercial Area:

Location	Category of Area/zone	Limits in dB(A) Leq*	
		National Standards	
		Day	Night
Deorali, Gangtok, East-Sikkim.	Mixed	65	55

Day time shall mean from 6am to 10pm.

Night time shall mean from 10pm to 6am.

**Note:** The value of Leq is slightly high due to traffic movement/celebratory music in homes and few sporadic cases of bursting of firecrackers were observed however, Firecrackers were totally banned in the entire state (appeal for ban on firecrackers was published in the Newspaper, broadcasting in the FM radio and displayed banner regarding ban on firecrackers by the Board )

*Submitted by*

**Ramesh Bhandari,FA**  
SPCB-Sikkim

**Tshering Palmo Bhutia,PA**  
SPCB-Sikkim

## Format of Report: Deepawali Monitoring 2021

City: M.G.Marg, Gangtok, East-Sikkim.

Latitude: 27.330304° N Longitude: 88.612696° E

### NOISE LEVEL DURING DEEPAWALI FESTIVAL-2021

Location	Pre-Deepawali (29.10.2021)			Deepawali Day (04.11.2021)		
	Lmin	Lmax	Leq dB(A)	Lmin	Lmax	Leq dB(A)
18:00 to 19:00 Hr	57.9	87.7	75	47.6	66.3	58
19:00 to 20:00 Hr	37.8	76.4	69	41.5	83.9	74
20:00 to 21:00 Hr	34	74	62	45.9	76.6	62
21:00 to 22:00 Hr	33.2	74.2	65	42.8	71.7	60
22:00 to 23:00 Hr	29.8	52.8	39	44.7	78.3	65
23:00 to 24:00 Hr	29.4	46	37	48.1	69.8	65

#### National Standards for Commercial Area:

Location	Category of Area/zone	Limits in dB(A) Leq*	
		National Standards	
		Day	Night
M.G.Marg, Gangtok, East-Sikkim	Commercial Area	65	55

Day time shall mean from 6am to 10pm.

Night time shall mean from 10pm to 6am.

**Note:** The value of Leq is slightly high due to traffic movement, loud music during Deepawali festival at M.G.Marg and few sporadic cases of bursting of firecrackers were observed however, Firecrackers were totally banned in the entire state (appeal for ban on firecrackers was published in the Newspaper, broadcasting in the FM radio and displayed banner regarding ban on firecrackers by the Board)

*Submitted by,*

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