

AMBIENT NOISE LEVEL AND AIR POLLUTION DURING DEEPAWALI, 2003

1. Ambient Noise Level Monitoring

The Ambient Noise level monitoring were carried out at various locations in Delhi namely AIIMS, Lajpat Nagar, New Friends Colony, East Arjun Nagar, Connaught Place, India Gate, Mayur Vihar (Phase – II), Patel Nagar, Kamla Nagar, Kidwai Nagar, Dilshad Garden and ITO. At Kamla Nagar, Dilshad Garden and ITO, the Noise level monitoring were conducted continuously between 17.00 Hrs. & 23.00 Hrs. whereas at other locations, the noise monitoring was conducted for short duration (Half Hourly Average) between the same time.

Findings

- Noise level on Deepawali day, 2003 increased at 8 locations and remained same at one location as compared to Deepawali day, 2002 (3 New locations could not be compared).
- Average Noise values were ranging from 69 to 90 L.eq dB(A) (decibels) against last years average values of 66 to 82 L.eq dB(A). (Standard limit 55 decibels).
- Normal day average values were ranging between 56 & 71 L.eq dB(A).
- Highest average values observed at New Friends Colony and Lajpat Nagar (Same places last year also).
- Noise levels were at peak between 20.30 Hrs. & 22.30 Hrs. At some places the maximum values exceeded even 100 L.eq dB(A). (Dilshad Garden 108 decibels between 21.30 Hrs. & 22.00 Hrs. and Kamla Nagar 109 decibels between 21.00 Hrs. & 22.00 Hrs.)

2. Ambient Air Quality Monitoring

Locations monitored during 2002 & 2003

- Ashok Vihar
- B.S.Z.Marg
- Patel Nagar

New monitoring locations During 2003

- Janakpuri (Residential)
- Nizamuddin (Residential)
- Sirifort (Residential)
- Shahdara (Industrial)
- Shahzada Bagh (Industrial)

Parameters Monitored

- Sulphur dioxide
- Nitrogen dioxide
- Suspended Particulate Matter
- Respirable Suspended Particulate Matter
- Carbon monoxide

Findings

Sulphur dioxide

Sulphur dioxide levels at BSZ Marg during 2003 have shown a slight increase as compared to 2002. This may perhaps be due to higher concentration recorded during Pre Deepawali days because of high traffic density in 2003 as compared to 2002.

At Ashok Vihar the levels have shown a significant decrease in 2003 as compared to 2002

Nitrogen dioxide

Nitrogen dioxide levels at BSZ Marg have increased 35% as compared to 2002. The Pre Deepawali levels were also found to be higher by 31% as compared to 2002. The reason for this increase may be attributed to increased traffic density.

At Ashok Vihar the levels have shown a decrease of 15% as compared to 2002.

Suspended Particulate Matter

SPM levels have shown a decrease of approximately 30% at both Ashok Vihar and BSZ Marg as compared to 2002

Respirable Suspended Particulate Matter

The levels have shown a decrease ranging between 20 to 35% during 2003 as compared to 2002 at the three locations monitored

Carbon monoxide

The levels at BSZ Marg have shown no change while at Patel Nagar the levels have decreased by 13% as compared to 2002.

Table - 01 Ambient Noise Level at different places in Delhi during Deepawali days in the year 2002 - 2003

Sl.		Average Noise Level in Leq. dB(A)			
		Deepawali Day		Normal Day	Standard Limit
No.	Locations	2002	2003	2003	
01	All India Institute of Medical Sciences	74	76 ↑	60	55
02	Lajpat Nagar	82	89 ↑	66	55
03	New Friends Colony	81	90 ↑	56	55
04	East Arjun Nagar	76	81 ↑	63	55
05	Connaught Place	66	74 ↑	70	65
06	India gate	67	69 ↑	63	50
07	Mayur Vihar-II	80	81 ↑	59	55
08	Patel Nagar	67	73 ↑	71	55
09	Kamla Nagar	78	78	68	55
10	Kidwai Nagar	**	76	62	55
11	Dilshad Garden	**	80	67	55
12	I.T.O (B.S.Z. MARG)	**	77	**	55

Note : Monitoring period between 17.00 and 23.00 hrs.

**** Not monitored**

Table 2 AMBIENT AIR QUALITY AT DIFFERENT LOCATIONS IN DELHI DURING DEEPAWALI 2002 & 2003

(All Values are in microgram per cubic metre)

Days	SULPHUR DIOXIDE (SO ₂)		NITROGEN DIOXIDE (NO ₂)		SUSPENDED PARTICULATE MATTER		RESPIRABLE SUSPENDED PARTICULATE MATTER		CARBON MONOXIDE					
	2002	2003	2002	2003	2002	2003	2002	2003	0600 - 1400	1400 - 2200	2200 - 0600	0600 - 1400	1400 - 2200	2200 - 0600
I.T.O.														
<i>Pre Deepavali</i>	9	14	90	129	769	516	432	300	2137	3939	6052	3779	5339	2648
<i>Deepavali</i>	12	15	64	99	1030	676	851	553	2491	3916	4781	2433	4709	4137
<i>Post Deepavali</i>	11	7	90	97	818	565	568	439	2393	4739	4430	2061	2691	4924
Ashok Vihar														
<i>Pre Deepavali</i>	8	14	100	98	1020	791	421	284	-	-	-	-	-	-
<i>Deepavali</i>	15	8	74	63	1630	1136	1082	877	-	-	-	-	-	-
<i>Post Deepavali</i>	7	6	96	56	1120	613	551	390	-	-	-	-	-	-
Patel Nagar														
<i>Pre Deepavali</i>	-	8	-	132	-	-	380	472	9979	8085	8343	5985	7674	3702
<i>Deepavali</i>	-	7	-	115	-	-	1011	788	4215	10182	7447	4468	9121	5508
<i>Post Deepavali</i>	-	6	-	103	-	-	445	504	4165	5759	3690	3353	4805	5739