

**Central Pollution Control Board
Parivesh Bhawan
East Arjun Nagar
Delhi 110032**

Press Release

Ambient Air and Noise Pollution Levels - Deepawali 2008

Executive Summary

Central Pollution Control Board has conducted Ambient Air quality and Noise monitoring at seven and nine locations respectively, in Delhi on the occasion of Deepawali festival, 2008 to see the environmental impact of bursting of crackers. The **findings of the monitoring** reveal the following:

- **Noise levels** during Deepawali, 2008 (October 28) were generally lower than Deepawali, 2007 (November 9) because of bursting of lesser number of crackers.
- **Air pollution levels** during 2008 (October 28) were also generally found to be lower as compared to Deepawali, 2007 (November 9) This can be attributed to lesser bursting of crackers and to some extent to favourable meteorological conditions like increased Mixing Height of 446 metres in Deepawali, 2008 as compared to 301 metres in 2007 and temperature being higher at 23.8°C in 2008 as compared to 21.1°C in Deepawali, 2007

Detailed Report

Ambient Air and Noise Pollution Levels - Deepawali 2008

Central Pollution Control Board has conducted Ambient Air quality and Noise monitoring at various locations in Delhi on the occasion of Deepawali festival, 2008 to see the environmental impact of bursting crackers.

To see the impact of bursting of crackers etc. on Air quality, the 24 Hourly continuous Ambient Air quality monitoring was carried out at BSZ Marg (ITO), Delhi college of Engineering, Sirifort and East Arjun Nagar from 27 to 29 October, 2008. Round-the-clock Air quality monitoring was also carried out on October 28, 2008 (Deepawali day) at the monitoring stations of CPCB (BSZ Marg (ITO), Pitampura, Sirifort, Janakpuri, Nizamuddin, Shahzada Bagh and Shahdara). The air quality data is presented in Table 1.

The Ambient noise level monitoring was carried out at nine locations in Delhi namely Lajpat Nagar, East Arjun Nagar, Mayur Vihar Phase – II, Pitam Pura, Kamla Nagar, Dilshad Garden, Ansari Nagar (AIIMS), Connaught Place and ITO between 18.00 hours & 24.00 hours on October 28, 2008 during Deepawali celebration. Monitoring data for Pre-Deepawali background monitoring and Deepawali day monitoring is presented in Table – 2.

Findings of Ambient Air Quality Monitoring

Sulphur dioxide (SO₂):

Sulphur dioxide concentrations on Deepawali day, 2008 decreased at all locations as compared to Deepawali day, 2007. During Deepawali day, 2008, concentration of SO₂ ranged between 7 and 24 µg/m³ as compared to 8 and 113 µg/m³ during Deepawali day, 2007. Levels of SO₂ have been found within the prescribed standard of 80 µg/m³ at all the locations.

Nitrogen dioxide (NO₂):

Nitrogen dioxide concentrations on Deepawali day, 2008 has decreased at two locations, increased at three locations and remained unchanged at two locations as compared to Deepawali day, 2007. The NO₂ levels exceeded marginally the prescribed standard of 80 µg/m³ at two locations namely, Shahdara and

Bahadur Shah Zafar Marg (ITO). At ITO, being high traffic zone, NO₂ exceeds the standard generally even on normal days. NO₂ values during Deepawali day 2008 ranged between 33 and 83 µg/m³ as compared to 45 and 91 µg/m³ in 2007.

Suspended Particulate Matter (SPM):

SPM levels have shown decreasing trend at all the locations except at Shahdara on Deepawali day, 2008 as compared to 2007. SPM levels during Deepawali day, 2008 ranged between 692 and 1331 µg/m³ against the level of 842 to 1463 µg/m³ during Deepawali, 2007. The highest SPM of 1331 µg/m³ was reported at Janakpuri (Residential Area).

Respirable Suspended Particulate Matter (RSPM):

RSPM levels have also shown decreasing trend at all the locations except at Shahdara on Deepawali day, 2008 as compared to 2007. RSPM values during Deepawali day, 2008 ranged between 578 and 931 µg/m³ as compared to 610 and 1294 µg/m³ during Deepawali, 2007. The highest RSPM of 931 µg/m³ was reported at Janakpuri (Residential Area).

Conclusion:

Decrease in SO₂, SPM and RSPM values in general may be attributed to bursting of lesser number of crackers and to some extent favourable meteorological conditions like increased Mixing Height from 301 metres in 2007 to 446 metres in Deepawali, 2008 and temperature from 21.1°C in 2007 to 23.8°C in Deepawali, 2008. However, slight increase in NO₂ levels have been observed at three locations namely Sirifort, Shahzada Bagh and Shahdara.

Findings of Ambient Noise Level Monitoring – Deepawali, 2008

- The ambient noise level at all the locations on Deepawali day, 2008 has increased as compared to normal day (pre Deepawali).
- During Deepawali, 2008 out of nine locations monitored ambient noise level has increased at three locations whereas it has decreased at six locations as compared to Deepawali, 2007.
- The average ambient noise levels on normal day were ranging from 53 to 69 dB(A) Leq. and on Deepawali day 67 to 85 dB(A) Leq.
- This year average noise levels on Deepawali day were found to be ranging from 67 to 85 dB(A) Leq. against last year average of 65 to 87 dB(A) Leq.

Conclusion

Overall noise level during Deepawali 2008 was lower than Deepawali 2007 possibly due to lesser bursting of crackers.

Overall Conclusion of Deepawali monitoring 2008

- **Noise levels** during Deepawali, 2008 (October 28) were generally lower than Deepawali, 2007 (November 9) because of bursting of lesser number of crackers.
- **Air pollution levels** during 2008 (October 28) were also in general found to be lower as compared to Deepawali, 2007 (November 9) mainly because of bursting of lesser number of crackers and to some extent favourable meteorological conditions like increased Mixing Height and temperature in 2008 as compared to 2007. However, slight increase in air pollution (except SO₂) was observed at one location namely Shahdara. Further, in general highest level of pollution was observed during 22.00 hours – 02.00 hours (next day).

For clarifications if required, any of the following officials may be contacted.

Dr. S.D. Makhijani, Member Secretary & Director

(Mob. 9891300231)

Mr. Gurnam Singh, Env. Engineer (Mob. 9891301133)

**Table 1 Ambient Air Quality at Various Locations during
Deepawali 2007 & 2008**

(All Values are in microgram per cubic metre)

Parameter→		SO ₂		NO ₂		SPM		RSPM	
Year→		2007	2008	2007	2008	2007	2008	2007	2008
B.S.Z Marg (ITO)		27	14↓	83	83→	842	692↓	670	578↓
Pitampura (R)		72	9↓	64	33↓	1463	1166↓	1294	712↓
Sirifort (R)		8	7↓	45	↑56	1314	1059↓	1139	901↓
Janakpuri (R)		113	24↓	91	81↓	1198	↑1331	1068	931↓
Nizamuddin (R)		30	9↓	61	61→	1236	911↓	1012	703↓
Shahazada Bagh (I)		46	21↓	64	↑78	1324	1097↓	966	719↓
Shahdara (I)		45	19↓	53	↑83	904	↑945	610	↑708
Concentration Range for Delhi		8 - 113	7 - 24	45 - 91	33 - 83	842 - 1463	692 - 1331	610 - 1294	578 - 931
Ambient Air quality Standards	Residential (R)	80		80		200		100	
	Industrial (I)	120		120		500		150	

* Deepawali Day 2007 – 09 November

* Deepawali Day 2008 – 28 October

Table 2 : Ambient Noise Level at different places in Delhi during Normal & Deepawali days in the year 2007-2008

S. No.	Location	Average Noise Level in dB (A) Leq.				Standard Limit
		Normal Day		Deepawali Day		
		2007	2008	2007	2008	
01.	Lajpat Nagar (R)	66	66	71	76 ↑	55
02.	East Arjun Nagar (R)	59	55 ↓	85	74 ↓	
03.	Mayur Vihar Phase – II (R)	62	53 ↓	87	85 ↓	
04.	Pitam Pura (R)	69	57 ↓	80	76 ↓	
05.	Kamla Nagar (R)	71	64 ↓	78	76 ↓	
06.	Dilshad Garden (R)	56	61 ↑	75	72 ↓	
07.	Ansari Nagar) (R)	56	59 ↑	65	76 ↑	
08.	Connaught Place (C)	67	66 ↓	70	67 ↓	65
09.	I.T.O (C)	68	69 ↑	68	70 ↑	

Noise Monitoring time for all the locations in 2008 are from **1800 hours to 2400 hours**

Noise level comparison (↑ or ↓) with respect to 2007

Normal day : August 2008.

R – Residential, C – Commercial