

PRESS NOTE

NOISE & AMBIENT AIR QUALITY MONITORING DELHI DURING DEEPAWALI 2005

Central Pollution Control Board has conducted Ambient Noise and Air quality monitoring at various locations in Delhi on the occasion of Deepawali festival, 2005 to see the environmental impact of bursting crackers. The Ambient noise monitoring was carried out for short duration (half an hour average) at 10 locations in Delhi namely Connaught Place, India Gate, Raja Garden, Pitampura, Model Town, Mayur Vihar Phase – II, Lajpat Nagar, AllMS, New Friends Colony and East Arjun Nagar between 18.00 hours & 23.00 hours on November 01, 2005 during Deepawali celebration. Noise monitoring for long duration (six hour average, 1700 to 2300 hours) at four locations namely Kamla Nagar, BSZ Marg (ITO), Patparganj and Dilshad Garden was also carried out during the same period. Pre-Deepawali background monitoring was carried out on October 25, 2005 during the same period for comparison.

To see the impact of bursting of crackers etc. on Air quality also, the 24 Hourly continuous Ambient Air quality monitoring was carried out at BSZ Marg (ITO), Delhi college of Engineering, Siri Fort, Ashok Vihar and Patparganj from³¹ October to 02 November 2005. Round-the-clock Air quality monitoring was also carried out on November 01, 2005 (Deepawali day) at the monitoring stations of CPCB (BSZ Marg (ITO), Ashok Vihar, Sirifort, Janakpuri, Nizamuddin, Shahzada Bagh, Shahdara) and Patparganj.

The findings of the monitoring are as under:

Ambient Noise level

- The Ambient noise level on Deepawali day has increased as compared to the normal day, i.e. October 25, 2005 at all the locations
- Noise level on Deepawali day, 2005 **decreased at eight locations** whereas it has **increased at five locations** as compared to the Deepawali day, 2004 (one location, being new could not be compared).
- The average ambient noise levels on normal day were ranging from 60 to 75 dB(A) Leq. and on Deepawali day 63 to 89 dB(A) Leq.
- Average noise values on Deepawali 2005 were ranging from 63 to 89 dB(A) Leq. against last year's average values of 64 to 88 dB(A) Leq.

Ambient Air Quality

- **Sulphur dioxide**

Sulphur dioxide concentrations have increased at three locations and decreased at three locations during the year 2005 as compared to 2004. At one location the concentration remain unchanged. During Deepawali 2005 SO₂ ranged between 7 and 24 µg/m³ as compared to 8 and 22 µg/m³ during 2004.

- **Nitrogen dioxide**

Decrease in nitrogen dioxide levels observed at all the locations except Ashok Vihar, and Janakpuri. NO₂ levels in 2005 were found between 46 and 83 µg/m³ as compared to 42 and 107 µg/m³ in 2004

- **Suspended Particulate Matter**

SPM levels have shown substantial decrease at all the locations as compared to 2004. SPM values during deepawali 2005 were ranging between 723 to 1148 $\mu\text{g}/\text{m}^3$ as compared to 1107 to 2247 $\mu\text{g}/\text{m}^3$ during Deepawali 2004. Decrease may be attributed to favorable meteorological conditions and possibly lesser bursting of crackers in 2005 as compared to 2004.

- **Respirable Suspended Particulate Matter**

RSPM levels have shown decreasing trend at all the locations as compared to 2004. RSPM values ranged between 337 and 552 $\mu\text{g}/\text{m}^3$ during Deepawali 2005 as compared to 607 and 1797 $\mu\text{g}/\text{m}^3$ during Deepawali 2004. Decrease may be attributed to favorable meteorological conditions and possibly lesser bursting of crackers in 2005 as compared to 2004.

Ambient Noise Level at different places in Delhi during Deepawali days in the year 2003-2005

| S. No. | Location | Average Noise Level in dB (A) Leq. | | | | | | Standard Limit |
|--------|---|------------------------------------|------|------|---------------|------|------|----------------|
| | | Normal Day | | | Deepawali Day | | | |
| | | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 | |
| 01. | All India Institute of Medical Sciences (AIIMS) | 60 | 60 | 60 | 76 | 64 | 63↓ | 55 |
| 02. | Lajpat Nagar | 66 | 66 | 62 | 89 | 74 | 78 | 55 |
| 03. | New Friends Colony | 56 | 57 | 64 | 90 | 75 | ↑76 | 55 |
| 04. | East Arjun Nagar | 63 | 71 | 66 | 81 | 83 | ↑88 | 55 |
| 05. | Connaught Place | 70 | 54 | 66 | 74 | 73 | 68↓ | 65 |
| 06. | India Gate | 63 | 54 | 65 | 69 | 67 | 63↓ | 50 |
| 07. | Mayur Vihar Phase - II | 59 | 67 | 71 | 81 | 87 | ↑89 | 55 |
| 08. | Raja Garden # | - | 52 | 75 | - | 80 | 76↓ | 55 |
| 09. | Pitam Pura # | - | 59 | 74 | - | 82 | 77↓ | 55 |
| 10. | Model Town # | - | 52 | 65 | - | 88 | 85↓ | 55 |
| 11. | Kamla Nagar | 68 | 69 | 62 | 78 | 79 | 77↓ | 55 |
| 12. | Dilshad Garden | 67 | 56 | 60 | 80 | 80 | ↑81 | 55 |
| 13. | I.T.O | - | 72 | 74 | 77 | 74 | 73↓ | 65 |
| 14. | Patparganj* | - | | 70 | - | - | 77 | 55 |

Noise Monitoring time from **1800 hours to 2100 hours**

Noise level comparison (↑ or ↓) with respect to 2004

Normal day 25 th October 2005. " - " Monitoring not conducted

Locations added in 2004 * Locations added in 2005

Ambient Air Quality at Various Locations during Deepawali 2004 & 2005
(All Values are in microgram per cubic metre)

| Parameter → | SO ₂ | | NO ₂ | | SPM | | RSPM | |
|-------------|-----------------|------|-----------------|------|------|------|------|------|
| Year→ | 2004 | 2005 | 2004 | 2005 | 2004 | 2005 | 2004 | 2005 |

| | | | | | | | | | |
|--|------------------------|----------|-----------|-------------|-----------|---------------|---------------|--------------|--------------|
| B.S.Z Marg (ITO) (R) | | 13 | ↑ 21 | 107 | 81 ↓ | 1107 | 742 ↓ | 896 | 378 ↓ |
| Ashok Vihar (R) | | 9 | ↑10 | 43 | ↑49 | 1826 | 975 ↓ | 1222 | 552 ↓ |
| Sirifort (R) | | 13 | 13 | 51 | 46 ↓ | - | 723 ↓ | 936 | 489 ↓ |
| Janakpuri (R) | | 8 | 7 ↓ | 42 | ↑ 65 | 1435 | 916 ↓ | 607 | 422 ↓ |
| Nizamuddin (R) | | 10 | 9 ↓ | 100 | 54 ↓ | 1654 | 1148 ↓ | 1161 | 337 ↓ |
| Shahazada Bagh (I) | | 22 | 11 ↓ | 93 | 83 ↓ | 1934 | 1070 ↓ | 827 | 520 ↓ |
| Shahdara (I) | | 17 | ↑24 | 80 | 75 ↓ | 2247 | 761 ↓ | 1797 | 407 ↓ |
| Concentration Range for Delhi | | 8- 22 | 7 - 24 | 42 - 107 | 46- 83 | 1107- 2247 | 723 - 1148 | 607- 1797 | 337 - 552 |
| Ambient Air quality Standards | Residential (R) | 80 | | 80 | | 200 | | 100 | |
| | Industrial (I) | 120 | | 120 | | 500 | | 150 | |