

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, NEW DELHI

Original Application No. 1233 of 2024

In the matter of Suo Moto Cognizance

In Re: **News Item titled " Heavy Metals in PM_{2.5} New Study reveals air quality concerns in East Delhi" appearing in the Times of India dated 29.09.2024**

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Deponent

Place: PATIALA

Date: 24.01.2025

(Janak Raj)
Scientific Officer,
Punjab Pollution Control Board
Head Office, Air Laboratory,
Patiala
(On behalf of respondent-PPCB)
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BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, NEW DELHI

Original Application No. 1233 of 2024

In the matter of Suo Moto Cognizance

In Re: **News Item titled " Heavy Metals in PM_{2.5} New Study reveals air quality concerns in East Delhi" appearing in the Times of India dated 29.09.2024**

Affidavit of Janak Raj, Scientific Officer, Air Laboratory, Punjab Pollution Control Board, Patiala on the behalf of Member Secretary, Punjab Pollution Control Board, Vatavaran Bhawan, Nabha Road, Patiala Punjab-147001 i.e. respondent no. 2.

I, the above-named deponent, do hereby, solemnly affirm and state as under:

RESPECTFULLY SHOWETH

1. That the Hon'ble National Green Tribunal was pleased to take Suo Moto cognizance of Original Application No. 1233 of 2024 on the basis of the news item titled "Heavy metals in PM_{2.5} New Study reveals air quality concerns in East Delhi" appearing in the




Scientific Officer,
Punjab Pollution Control Board,
Patiala.

Times of India dated 29.09.2024. The news item relates to a study conducted by the Indian Institute of Technology, Delhi revealing severe heavy metal pollution in East Delhi's air, raising significant health concerns. The news item states that the study formulated the heavy metal exposure index (HEI) in East Delhi (part of a mega city), Jaisalmer (desert), Ludhiana (industrial city), Visakhapatnam (coastal), Panchkula and Patiala. The news item highlights that the primary sources of these pollutants include industrial emissions, vehicular exhaust, and construction activities.

2. That after consideration, the Hon'ble National Green Tribunal was pleased to pass an order dated 16.10.2024 thereby impleading the Delhi Pollution Control Committee (DPCC), Punjab Pollution Control Board (PPCB), Central Pollution Control Board (CPCB), Ministry of Environment, Forest & Climate Change (MoEF&CC), District Magistrate, East Delhi and District Magistrate, Ludhiana as respondents in the case with direction to file their response/reply by way of affidavit.




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Scientific Officer,
Punjab Pollution Control Board,
Patiala.

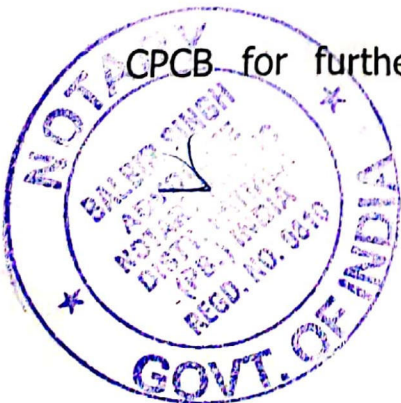
3. That the present affidavit/report is being filed in compliance to the order dated 16.10.2024 passed by the Hon'ble Tribunal.
4. That at the outset, it is submitted that heavy metal exposure index (HEI) was calculated by the Indian Institute of Technology, Delhi based on the concentration of 7 number heavy metals namely Cadmium, Arsenic, Chromium, Copper, Zinc, Molybdenum and Lead found in the Particulate Matter-PM_{2.5} samples collected in 2019 & 2020 in the six cities of India. The CPCB vide notification dated 18.11.2009 has notified National Ambient Air Quality Standards-2009 only for 3 metals i.e. Lead, Arsenic & Nickel. The CPCB has not specified standard for heavy metals Cadmium, Chromium, Copper, Zinc and Molybdenum which were too part of study conducted by the Indian Institute of Technology, Delhi for calculating the heavy metal exposure index (HEI) in the six cities. The CPCB has also not included any methodology for calculating the heavy metal exposure index (HEI) for 3 number heavy metals in the National Ambient Air Quality Standards-2009 for prescribed metals.




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Patiala.

5. That the Punjab Pollution Control Board has set up 3 number manual ambient air quality monitoring station in Patiala city and 4 number manual ambient air quality monitoring station in Ludhiana city. These stations are Operated & Maintained under National Ambient Air Quality Monitoring Programme (NAMP). Presently, 3 pollutants namely Particulate Matter-PM₁₀, Sulphur Dioxide (SO₂) & Nitrogen Dioxide (NO₂) are being monitored at these monitoring stations as per guidelines of the CPCB under NAMP. The Board is not monitoring the particulate matter-PM_{2.5} through manual monitoring stations in the Ludhiana & Patiala city. The CPCB has sanctioned the funds to the Board for the purchase of Particulate Matter-PM_{2.5} samplers for augmentation of PM_{2.5} monitoring facility at existing/new stations under NAMP. The Board has floated tender twice for the purchase of PM_{2.5} samplers as per specification provided by the CPCB, but, no bidder has technically qualified and the Board has cancelled the tender both times. The Board has taken up the matter with the

CPCB for further directions in the matter as presently no



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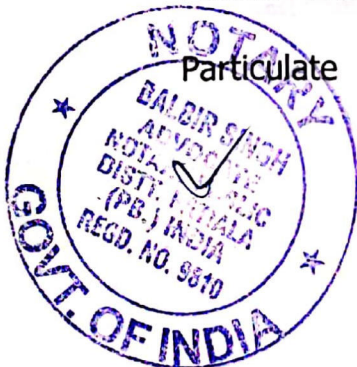
Scientific Officer,
Punjab Pollution Control Board,
Patiala.

manufacturer/firm has met the revised specification prescribed by the CPCB for procurement of PM_{2.5} samplers.

6. That apart from the manual monitoring stations, the Board has also set up one number Continuous Ambient Air Quality Monitoring (CAAQMS) in the city of Ludhiana and Patiala. None of the heavy metals is being monitored at these both CAAQMS at Ludhiana & Patiala.

7. That in compliance to the directions of the CPCB, the Board has carried out special Monitoring/measurement of Lead, Nickel and Arsenic in Particulate Matter-PM₁₀ for two consecutive days in a month for the Months of April-2024, May-2024 & June-2024. The ambient air quality data w.r.t. lead, Nickel & Arsenic for the said period for both cities (Ludhiana & Patiala) is attached herewith as per **Annexure-I**. During said period, the concentration of Lead, Nickel and Arsenic in the ambient air has not exceeded from prescribed National Ambient Air Quality Standards, 2009 for two consecutive days for both Ludhiana & Patiala cities. This result/concentration of heavy metals in

Particulate Matter-PM₁₀ implies that concentration of similar



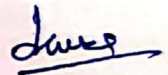
June
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Patiala.

heavy metals in Particulate Matter-PM_{2.5} shall be within prescribed National Ambient Air Quality Standards, 2009 as Particulate Matter-PM_{2.5} is part of Particulate Matter-PM₁₀.

8. That the deponent may kindly be allowed to place on record the present affidavit in compliance of order dated 16.10.2024 for kind consideration and appropriate orders of this Hon'ble Tribunal.

Place: PATIALA

Date: 24.01.2025

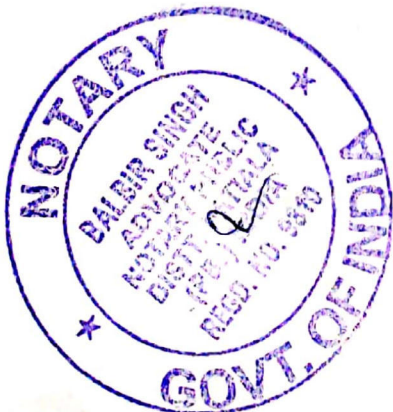


Deponent

(Janak Raj)
Scientific Officer,
Punjab Pollution Control Board
Head Office, Air Laboratory,
Patiala
(On behalf of respondent-PPCB)



Scientific Officer,
Punjab Pollution Control Board
Patiala.



VERIFICATION:

I, the deponent above named, do hereby verify and state that the contents of the above affidavit are true and correct to the best of my knowledge and belief, as derived from the official record. No part of the above affidavit is false and nothing material has been concealed there from.

Janak Raj

Deponent

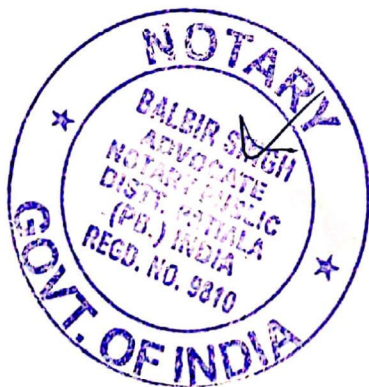
Place: *PATIALA*

Date: *24.01.2025*

(Janak Raj)
Scientific Officer,
Punjab Pollution Control Board
Head Office, Air Laboratory,
Patiala
(On behalf of respondent-PPCB)

Janak Raj

Scientific Officer,
Punjab Pollution Control Board
Patiala.



The Contents of this Affidavit/ document have been read over to the deponent He/She has accepted it true & Correct.



This Document has been entered in my register at Serial No. *1165*
Dated *24-1-2025*

Annexure-I

Ambient air quality data w.r.t. heavy metals in Ludhiana and Patiala cities

Location & Monitoring	Date of monitoring	Concentration of heavy metals		
		Lead ($\mu\text{g}/\text{m}^3$)	Nickel ($\mu\text{g}/\text{m}^3$)	Arsenic ($\mu\text{g}/\text{m}^3$)
		Pb ($\mu\text{g}/\text{m}^3$) Permissible Limit- 1 $\mu\text{g}/\text{m}^3$	Ni (ng/m3) Permissible Limit- 20 ng/m3	As (ng/m3) Permissible Limit- 6 ng/m3
Ludhiana	29.04.2024	0.167	56.24	17.75
	30.04.2024	0.04	17.08	3.1
	08.05.2024	0.094	22.4	3.87
	09.05.2024	0.107	12.2	1.101
	05.06.2024	0.044	13.89	4.83
	06.06.2024	0.049	10.76	3.77
Patiala	29.04.2024	BDL(BDL<0.018 $\mu\text{g}/\text{m}^3$)	10.08	BDL (BDL<1.84 ng/m3)
	30.04.2024	BDL(BDL<0.018 $\mu\text{g}/\text{m}^3$)	4.9	BDL (BDL<1.84 ng/m3)
	06-05-2024	0.07	BDL (BDL<1.84 ng/m3)	BDL (BDL<1.84 ng/m3)
	07-05-2024	BDL(BDL<0.018 $\mu\text{g}/\text{m}^3$)	BDL (BDL<1.84 ng/m3)	BDL (BDL<1.84 ng/m3)
	13-05-2024	BDL(BDL<0.018 $\mu\text{g}/\text{m}^3$)	7.37	4.16
	14-05-2024	BDL(BDL<0.018 $\mu\text{g}/\text{m}^3$)	7.52	3.76
	03-06-2024	BDL(BDL<0.018 $\mu\text{g}/\text{m}^3$)	3.4	2.79
	04-06-2024	BDL(BDL<0.018 $\mu\text{g}/\text{m}^3$)	3.63	3.22

BDL: Below Detectable Limit.

Note

- Value does not exceed the prescribed limit under National Ambient Air Quality Standard, 2009 for two consecutive days during the monitoring period.
- Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.

This Document has been entered
In my register at Serial No. 1165
Dated 24.1.2025

Scientific Officer,
Punjab Pollution Control Board,
Patiala.

ATTESTED
NOTARY PUBLIC
PATIALA INDIA

The Contents of this Affidavit/
document have been read over to
the deponent He/She has accepted
it true & Correct