

BEFORE THE HON'BLE SUPREME COURT OF INDIA

NEW DELHI

WRIT PETITION (Civil) No.13029 of 1985

IN THE MATTER OF:

M.C.MEHTA

..... PETITIONER

VERSUS

UNION OF INDIA AND ORS

...RESPONDENTS

I N D E X

S. NO.	PARTICULARS	PAGE NO.
1.	AFFIDAVIT ALONGWITH THE REPORT ON BEHALF OF THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE	1-3
2.	THE REPORT ALONGWITH MINUTES OF MEETING DATED 17.05.2019 IS ANNEXED AS ANNEXURE-1.	4-11

FILED THROUGH

COUNSEL FOR THE RESPONDENT

Delhi

DATED: .2019

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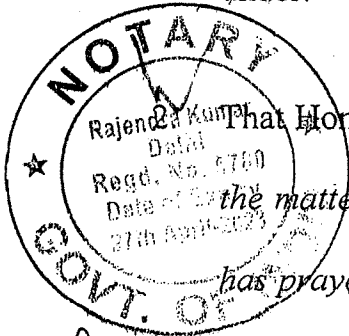
UNION OF INDIA & ORS.

.....RESPONDENTS

AFFIDAVIT ALONG WITH THE REPORT ON BEHALF OF THE
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

I, Ritesh Kumar Singh working as Joint Secretary in the Ministry of Environment, Forest and Climate Change (MoEF&CC), Indira Paryavaran Bhawan, Jorbagh Road, New Delhi, do hereby solemnly affirm and declare as under:

1. That I am duly authorized by the Ministry of Environment, Forest and Climate Change to swear this affidavit and I am conversant with the facts and circumstances of the present case and am thereby competent to depose as under:



That Hon'ble Supreme Court vide its order dated 12/07/2019 has directed "As the matter has been sorted out, learned Additional Solicitor General of India has prayed for time to file a report on the consensus reached as to the use of new technologies."

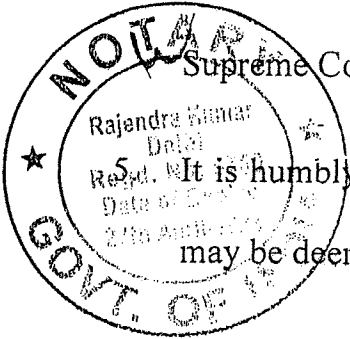
3. That a Meeting was held under the Chairmanship of Joint Secretary, MoEF&CC regarding Environmental Norms of NOx for Coal Based Thermal Power Plants on 17th May, 2019 at Indira Paryavaran Bhawan, Jor Bagh. During the Meeting, it was agreed in principle to revise the NOx norms from

(Ritesh Kumar Singh)
Joint Secretary,
Ministry of Environment, Forest and Climate Change
Indira Paryavaran Bhawan, New Delhi

300 mg/Nm³ to 450 mg/Nm³ for Thermal Power Plants installed between 01/01/2004 to 31/12/2016 and the same will be presented for a final decision to Secretary MoEF&CC and Secretary MoP. The Report alongwith Minutes of Meeting dated 17/05/2019 is annexed as **Annexure-1**. This decision has since been approved by Secretary MoEF&CC and Secretary MoP.

4. It is submitted that to review the decision taken in the Minutes of Meeting dated 17th May, 2019, a Meeting was held in the Office of Ld ASG Shri A.N.S. Nadkarni on 11/07/2019 with Ms Aparajita Singh Amicus Curiae, Shri Ritwik Dutta Amicus Curiae, Ms Sunita Narain from Environmental Pollution Control Authority (EPCA), Official from Ministry of Power (MoP), Central Pollution Control Board (CPCB), Central Electricity Authority (CEA) and National Thermal Power Corporation (NTPC) and Ministry of Environment, Forest and Climate Change (MoEF&CC). The decision of the Minutes of Meeting dated 17/05/2019 was discussed in length and therefore agreed to revise the NOx norms from 300 mg/Nm³ to 450 mg/Nm³ for Thermal Power Plants installed between 01/01/2004 to 31/12/2016. Further, it is submitted that the pilot project studies on new technologies for NOx emission level for TPPs installed after 01/01/2017 have been completed by NTPC. For these TPP, NOx emission norms shall be reviewed after submission of final report of these pilot test studies to MOEF &CC and the same will be discussed with stakeholders and then presented to the Hon'ble Supreme Court.

It is humbly prayed that the Hon'ble Court may kindly pass such order(s) as may be deemed fit and proper in the facts and circumstances of this case.

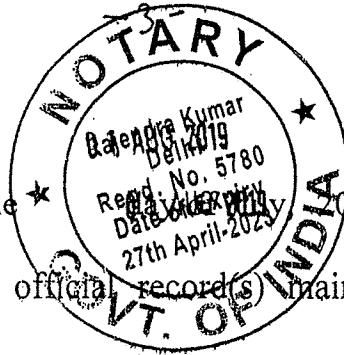


(रितेश कुमार सिंह)
(RITESH KUMAR SINGH)
जुंटा सचिव/Joint Secretary
पर्यावरण, वन एवं जलवायु परिवर्तन विभाग
Mo Environment, Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi


DEPONENT

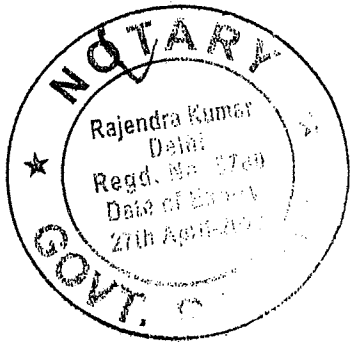
VERIFICATION:

Verified at New Delhi on this the 27th April 2019 that the contents of this reply affidavit based on official record(s) maintained and information available in the office are correct to my knowledge and belief. No part of it is false and nothing has been concealed there from.



[Signature]
DEPONENT

(रितेश कुमार सिंह)
(RITESH KUMAR SINGH)
जoint Secretary
पर्यावरण, वन एवं जलवायु परिवर्तन विभाग
Mo Environment, Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi



ATTESTED *[Signature]*
RAJENDRA KUMAR
NOTARY, DELHI-R-5780 9890446208
GOVERNMENT OF INDIA
SUPREME COURT OF INDIA
COMPOUND, NEW DELHI
Register Pg./Sl. No. 12742

01 AUG 2019

CERTIFIED THAT THE CONTENTS EXPLAINED TO THE
DEPONENT EXECUTIVE WHO IS DEEMED PERFECTLY
UNDERSTAND & AFFIRMED EMPLOYED BEFORE ME
DELHI ON.....
IDENTIFY THE EXECUTIVE
SIGNER IN MY PRESENCE
01 AUG 2019
[Signature]
IDENTIFIED

Minutes of the Meeting regarding Environmental Norms of NO_x for Coal based Thermal Power Plants on 17th May, 2019 at Indira Paryavaran Bhawan, MoEF&CC, New Delhi.

A Meeting was held under the Chairmanship of Shri Ritesh Kumar Singh, Joint Secretary, MoEF&CC regarding Environmental Norms of NO_x for Coal based Thermal Power Plants on 17th May, 2019 at Indira Paryavaran Bhawan, MoEF&CC, New Delhi. The list of participants is **Annexed A**.

2. At the outset, the Chairman welcomed the Officers of Ministry of Power (MoP), CEA, CPCB and NTPC. The Chairman intimated that the CPCB joint monitoring report has been received and requested to CPCB, MoP / NTPC to brief about report and implementation of Environmental Norms for NO_x by Coal based Thermal Power Plants as per notification dated 07/12/2015.
3. The Officers from the MoP / NTPC made a detailed brief and intimated that an Affidavit was filed by CEA on 20/8/2018 with respect to NO_x, enclosing MoP Letter dated 16/08/19 requesting for changing norm of 300 mg/Nm³ and 100 mg/Nm³ for TPP (units) installed after 31/12/2003 to 450 mg/Nm³ which is practically achievable with the Combustion Modification. In this regards a Meeting was held under the Chairmanship of Secretary, MoEF&CC on 30/10/18 and decided that MoP will make assessment report and formulate a strategy on NO_x. Further, during the briefing to ASG in the matter M.C Mehta Vs UOI & Ors which is pending before Hon'ble Supreme Court of India for implementation of TPP Environmental Standard it was decided that to assess NO_x emissions joint sampling with CEA & CPCB may be carried out at TPPs having Combustion Modification by design and CPCB shall submit Report to MoEF&CC.
4. The Officer of CPCB intimated that the joint monitoring was carried out in 7 units of 4 Thermal Power Plants by joint team of CPCB and CEA during the period of 13/02/2019 to 02/04/2019. Out of 07 monitored units only 05 units were found complying with the NO_x emission standards of 300 mg/Nm³ at full load only, however some units are not complying during the partial load operation to the Plants established between 01/01/2004 and 31/12/2016 even after combustion modification. The copy of report is at **Annexure 'B'**.
5. The Committee discussed: i) the report submitted by CPCB and CEA the joint monitoring was carried out in 7 units of 4 Thermal Power Plant ii) difficult to achieve by combustion modification along to achieve norms of 300 mg/Nm³ iii) assurance given to Power generating companies by BHEL would be able to achieve NO_x emission level of 450 mg/Nm³ by combustion modification iv) operational issues with the Selected Non-Catalytic Reduction (SNCR) as it require Urea/Ammonia for control of NO_x and its suitability all type of boiler, temperature band v) globally available SCR system for NO_x control are not proven for Indian Coal having high ash contained and retrofitting is not possible in operating/under construction plants vi) No_x emission level varies based on the operational conditions of the unit for example unit load, composition of the coal, mill combination (i.e top mill, bottom mill, middle mill operation), excess air etc.
6. After detailed discussion, it was agreed in principle to revise the NO_x norms from 300 mg/Nm³ to 450 mg/Nm³ for Thermal Power Plants installed between 01/01/2004 to 31/12/2016 and same will be presented for a final decision to Secretary MoEF&CC and Secretary MoP.
7. The meeting ended with vote of thanks to the Chair.

Annexure - A

List of the Participants attended the meeting of Environmental Standard for NOx: Coal based Thermal Power Plants under the Chairmanship of Shri Ritesh Kumar Singh, Joint Secretary, CP Division, MoEF&CC on 17th May, 2019.

S. No.	Name	Designation
1.	Shri Ritesh Kumar Singh	Chairman, Joint Secretary, MoEF&CC
2.	Shri Vivek Kumar Dewangan	Joint Secretary, MoP
3.	Shri Pawan Kumar Kalarwal	Director, MoP
4.	Shri Rajeev Kumar	Director, CEA
5.	Shri S. K. Paliwal	Scientist 'D', CPCB
6.	Shri P.K.Mahapatra	Director (Technical), NTPC
7.	Shri Udayan Kumar	NTPC
8.	Shri Pankaj Kr Gupta	NTPC
9.	Shri A. K. Srivastava	NTPC
10.	Shri B. S. Rajput	NTPC
11.	Dr. H. Kharkwal	Convenor, Scientist 'E' MoEF&CC



6-

केन्द्रीय प्रदूषण नियंत्रण बोर्ड / Annexure
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

B-33014/7/2019/IPC-II/TPP/ 30)

May 02, 2019

To

Dr. H. Kharkwal, Scientist 'D'
Ministry of Environment, Forests & Climate Change
2nd Floor, Prithvi Wing,
Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj,
New Delhi - 110 003

Sub: NOx emission norms for Thermal Power Plants - reg.

Sir,

Please refer to your Letter No. Q-15017/40/2007-CPW dated 30.04.2019 seeking NOx emission monitoring results/ report of joint monitoring carried out by CPCB and CEA. The results of monitoring carried out by joint team is enclosed herewith for your information and necessary action.

Encl: as above

Yours faithfully,

[Nazimuddin]
Divisional Head-IPC-II

Summary of NOx Emission Monitoring Results

NOx emission monitoring has carried out in 7 units of 4 Thermal Power Plants by joint team of CFCB and CEA during the period of 13.02.2019 to 02.04.2019. The results of emission monitoring are enclosed at Annexure - I - IV. The brief analysis of NOx emission monitoring carried out by joint team is as follows:

1. Adani Power Rajasthan Limited, Kawai, Distt. Baran (Rajasthan):

Both units of Adani Power Rajasthan Limited, Kawai were running on approximately full load (Unit - 1: 660 MW, Unit - 2: 635 MW) and the NOx emission values from Units - 1 & 2 were found to be 509 mg/Nm³ and 584 mg/Nm³. *Both units were found exceeding the prescribed NOx emission limit i.e. 300 mg/Nm³.*

2. NTPC Mouda Super TPS, Mouda, Dist-Nagpur, Maharashtra:

Units - 3 & 4 of NTPC Mouda Super TPS, Mouda were running on 88 - 92 % load (Unit - 3: 460.6 MW, Unit - 4: 441.0 MW) and the NOx emission values from Units - 1 & 2 were found to be 202.6 mg/Nm³ and 178.95 mg/Nm³. *Both units were found complying with the prescribed NOx emission limit i.e. 300 mg/Nm³.*

3. Mahatma Gandhi TPS, CLP, Dist-Jhajjar, Haryana:

Unit - 1 of Mahatma Gandhi TPS, CLP was running on 60 - 68 % load (401 - 449 MW). 6 Nos. of samples were drawn from Unit - 1 and the NOx emission values were found to be 71 mg/Nm³ to 286.7 mg/Nm³. Unit - 2 was running on 31% & 42% load and 02 Nos. of samples were drawn for Unit - 2 and NOx emission values were found to be 320.5 mg/Nm³ and 227.8 mg/Nm³.

4. Nabha Power Limited, Rajpura, Punjab:

Total 04 Nos. of samples were drawn from Unit - 1 of Nabha Power Limited, Rajpura. 02 samples were drawn at 50% operating load of unit and 02 samples were drawn at full load operation. The NOx emission values at 50% operating load (522.7 mg/Nm³ and 559.4 mg/Nm³) were found to exceeding the prescribed limit. However, *at full load operation the NOx emission values were found 92.8 mg/Nm³ and 282.3 mg/Nm³ i.e. complying with NOx emission limit of 300 mg/Nm³.*

Conclusion:

05 out of 07 monitored units have been found complying with the NOx emission standards of 300 mg/Nm³ applicable to the Plants established between 01.01.2004 and 31.12.2016.



Central Pollution Control Board
Regional Directorate (Central),
Bhopal

1. M/s Adani Power Rajasthan Limited, Kawai, Distt. Baran (Rajasthan)

Manual Monitoring Data:

Sl. No.	Location	Date of Monitoring	Avg. Load (MW)	NOx Concentration (mg/Nm ³)	Measured O ₂ concentration (%)	NOx conc. after O ₂ correction at 6% (mg/Nm ³)
1	Unit-I	16.02.2019	660/660	483.64	6.74	509
2	Unit-II	13.02.2019	635/660	585.64	5.95	584

All values are in mg/Nm³

Online Monitoring Data from CEMS:

Sl. No.	Location	Date of Monitoring	Time Duration	NOx Concentration (mg/Nm ³)
1	Unit-I	16.02.2019	10:00 - 18:00	278 - 658
2	Unit-II	13.02.2019	10:00 - 18:00	217 - 388



Central Pollution Control Board
Regional Directorate (West),
Vadodara

M/s NTPC Mouda Super TPS, Mouda, Dist-Nagpur, Maharashtra

Manual Monitoring Data:

Sl. No.	Location	Date of Monitoring	Avg. Load (MW)	NOx Concentration (mg/Nm ³)	Measured O ₂ concentration (%)	NOx conc. after O ₂ correction at 6% (mg/Nm ³)
1	Unit-III	28.02.2019 (11:00 - 13:30)	460.6/500	178.35	7.8	202.60
2	Unit-IV	27.02.2019 (12:00 - 14:30)	441.0/500	168.20	6.9	178.95

All values are in mg/Nm³

Online Monitoring Data from CEMS:

Sl. No.	Location	Date of Monitoring	Time Duration	NOx Concentration (mg/Nm ³)
1	Unit-III	28.02.2019	11:00 - 13:30	292 - 365
2	Unit-IV	27.02.2019	12:00 - 14:30	363 - 498



**Central Pollution Control Board
Head Office, Delhi**

M/s Mahatma Gandhi TPS, CLP, Dist-Ihajjar, Haryana

Manual Monitoring Data:

Sl. No.	Location	Date of Monitoring	Avg. Load (MW)	NOx Concentration (mg/Nm ³)	Measured O ₂ concentration (%)	NOx conc. after O ₂ correction at 6% (mg/Nm ³)
1	Unit-I	18.03.2019	404.5/660	229.1	7.7	258.6
2	Unit-I	18.03.2019	448.9/660	82.8	7.7	93.7
3	Unit-I	19.03.2019	401/660	63.0	7.7	71.1
4	Unit-I	19.03.2019	405/660	157.2	9.0	196.8
5	Unit-I	19.03.2019	401/660	145.3	9.11	183.6
6	Unit-I	19.03.2019	405/660	226.9	9.11	286.7
7	Unit-II	18.03.2019	280/660	141.9	11.62	227.8
8	Unit-II	18.03.2019	207/660	199.6	11.62	320.5

All values are in mg/Nm³

Online Monitoring Data from CEMS:

Sl. No.	Location	Date of Monitoring	Time Duration	NOx Concentration (mg/Nm ³)
1	Unit-I	18.03.2019	14:00 - 18:00	188 - 226
2	Unit-I	19.03.2019	14:00 - 18:00	196 - 370
3	Unit-II	18.03.2019	14:00 - 18:00	172 - 294



**Central Pollution Control Board
Head Office, Delhi**

M/s Nabha Power Limited, Rajpura, Punjab

Manual Monitoring Data:

Sl. No.	Location	Date of Monitoring	Avg. Load (MW)	NOx Concentration (mg/Nm ³)	Measured O ₂ concentration (%)	NOx conc. after O ₂ correction at 6% (mg/Nm ³)
1	Unit-I	02.04.2019 (08:35 AM)	350/700	461.03	8.62	559.4
2	Unit-I	02.04.2019 (08:35 AM)	350/700	430.8	8.62	522.7
3	Unit-I	02.04.2019 (11:45 AM)	700/700	99.7	4.90	92.8
4	Unit-I	02.04.2019 (11:45 AM)	700/700	303.1	4.90	282.3

All values are in mg/Nm³

Online Monitoring Data from CEMS:

Sl. No.	Location	Date of Monitoring	Time Duration	NOx Concentration (mg/Nm ³)
1	Unit-I	02.04.2019	08:00 - 09:00	203 - 207
2	Unit-I	02.04.2019	11:00 - 12:00	197 - 205