

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
ORIGINAL APPLICATION No. 1016/2019
&
ORIGINAL APPLICATION No. 1088/2018**

IN THE MATTER OF:-

UTKARSH PANWAR

APPLICANT

VS.

CPCB & ORS.

RESPONDENTS

&

DINESH CHAHAL & ORS.

APPLICANT

VS.

UNION OF INDIA & ORS.

RESPONDENTS

INDEX

S. No.	PARTICULARS	PAGE No.
1.	SUBMISSION OF CENTRAL POLLUTION CONTROL BOARD IN COMPLIANCE OF HON'BLE NGT ORDER DATED 30.01.2020, IN THE MATTER OF O.A. NO. 1016 OF 2019, UTKARSH PANWAR VS. CPCB & ORS., AND O.A NO. 1088/2018 DINESH CHAHAL & ORS. VS. UNION OF INDIA & ORS. BEFORE THE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH, NEW DELHI.	
2.	ANNEXURE- I DIRECTION ISSUED BY EPCA REGARDING ZIG-ZAG TECHNOLOGY DATED 14.02.2020.	
3.	ANNEXURE- II HON'BLE NGT ORDER DATED 30.01.2020 IN THE MATTER OF O.A. NO. 1016 OF 2019, UTKARSH PANWAR VS. CPCB & ORS.	
4.	ANNEXURE- III HON'BLE NGT ORDER DATED 30.01.2020 IN THE MATTER OF O.A. NO. 1088/2018 DINESH CHAHAL & ORS. VS. UNION OF INDIA & ORS.	



**(AJAY AGGARWAL)
SCIENTIST -E
CENTRAL POLLUTION CONTROL BOARD
PARIVESH BHAWAN, EAST ARJUN NAGAR,
DELHI-110032**

**DATE: 04.03.2020
PLACE: DELHI**

Submission of Central Pollution Control Board (CPCB), in compliance of the Order of Hon'ble NGT dated 30/01/2020, in the matters of :

O.A. No. 1088 of 2018 (I.A. No. 98/2019, 100/2019, 101/2019, 119/2019 & 266/2019); Dinesh Chahal & Ors. Vs Union of India & Ors.

and

O.A No. 1016 of 2019; Utkarsh Panwar Vs CPCB & Ors.

The Hon'ble NGT vide its order dated 30/04/2019 in the matter of OA No. 1088/2018 (I.A No. 98/2019, 101/2019, 119/2019 & 266/2019); Dinesh Chahal & Ors Vs. Union of India & Ors, observed and directed as under:

"We are satisfied that in absence of any study in spite of orders of this Tribunal dated 21.02.2019, it will be hazardous to permit operation of the brick kilns in view of acknowledged adverse impact on the air quality. At the same time, we direct the State of Haryana and the CPCB to undertake study of air quality carrying capacity assessment and impact of operation of the conventional brick kilns using agri-residue at the earliest and furnish a report to this Tribunal. CPCB will be the nodal agency. If burning of crop residue helps the situation, the same may be studied and report submitted. Mechanism be suggested to ensure that only crop residue is used for firing when conventional brick kilns are operated. We note that impugned order is not limited to kilns using crop residue. The order applies to every kiln without any restriction or safeguard. The same will have to be modified to that extent."

The Hon'ble NGT vide its order dated 30/7/2019, further directed as under:

"The study may be carried out in comparable area. It is stated that the study requires three months. The CPCB may in its report indicate the location/area and names of the brick kilns where study has been carried out."

Accordingly, a report was filed by CPCB, on 22/01/2020 and during hearing of the matter on 30/01/2020, Hon'ble NGT observed as under:

- *"The report does not mention the carrying capacity of the area in question i.e. non-NCR area in the State of Haryana.*

- *The other issue dealt with is whether brick kilns can be allowed by using crop residue as a substitute for Zig-zag technology. The observations and conclusions drawn in the report are non-conclusive and cannot be relied upon in terms of small data base of sample size and number of days for which the sampling has been carried out. Besides, more brick kilns in each category should have been covered to avoid statistical errors in decision making. The performance of brick kilns is required to be evaluated against the background concentration and carrying capacity of the area.*
- *Further, in view of large number of brick kilns operating in the area, besides carrying capacity issue with regard to ambient air, there are issues with regard to environmental degradation on account of operation of such large number brick kilns having potential for loss of productive top soil which takes thousands of years to form and is a prime factor which determines agricultural productivity.*
- *.....question whether FCBTK technology can be allowed in non-NCR region of Haryana by using agri-residue will be determined in the light of further report as to the carrying capacity of the area in the light of potential for impact on the air quality of the area and on NCT Delhi specially during the winter months and degradation of top soil."*

It was directed by Hon'ble NGT vide order dated 06/02/2020, in the matter of O.A. No. 1088 of 2018; Dinesh Chahal & Ors. Vs Union of India & Ors directed as under:

"Accordingly let the carrying capacity study which has adequate samples in terms of number of brick kilns and days for which the emissions monitored be conducted covering the impact on ambient air and the loss of top soil. Such study may particularly assess the permissible number of brick kilns and technology to be used for the same in the non-NCR region. Let further report in the matter be furnished by the Member Secretary, CPCB by 31.03.2020 by e-mail at judicial-ngt@gov.in."

The hearing of the matter in OA No. 1016/2019 Utkarsh Panwar Vs CPCB & Ors., was held on 30/01/2020 along with O.A. NO. 1088/2018 and Hon'ble NGT vide its order dated 6/2/2020, in the matter of O.A. NO. 1016/2019 directed as under:

"Since brick kilns can be permitted only after ascertaining the carrying capacity as above, let a report about carrying capacity of the NCR region in above terms be furnished by CPCB before the next date by e-mail at judicial-ngt@gov.in. List again on 05.03.2020"

It is humbly submitted as under:

Hon'ble NGT has directed to study the impact of brick kilns operation on loss/degradation of top soil. It is proposed to seek technical assistance from external experts, for assessing the impact of brick kilns' operation on loss/degradation of top soil.

It has also been directed by Hon'ble NGT to conduct Carrying Capacity Study of brick kilns, with adequate samples in terms of number of brick kilns & days for which monitoring be conducted, both in NCR and Non-NCR regions.

Assessment with respect to the permissible number of brick kilns and technology to be used for the same in the non-NCR region and the potential of brick kilns based on FCBTK technology using agro-residues for impact on the air quality of NCT Delhi, specially during the winter months, are also to be studied.

It is proposed to monitor brick kilns operating on both technologies i.e FCBTK and Zig-zag, using different types of fuels, as per following matrix:

S.No	Type of Brick Kiln	Fuel Type	Total number of Brick Kilns and number of days for which monitoring to be conducted		Number of Samples per monitoring/ brick kiln	Total Number of Samples
			No. of Brick Kilns	No. of days		
1	FCBTK*	Agro-residues (Mustard Straw)	10	3	3	90
2	FCBTK	Agro-residues (Cotton Stalk)	10	3	3	90
3	FCBTK	Agro-residues (Guar Beans)	10	3	3	90
4	FCBTK	Coal	10	3	3	90
5	Zig-Zag	Agro-residues (Mustard Straw)	05	3	3	45
6	Zig-Zag	Agro-residues (Cotton Stalk)	05	3	3	45
7	Zig-Zag	Agro-residues (Guar Beans)	05	3	3	45
8	Zig-Zag	Coal	10	3	3	90
		Total	65			585

- FCBTK: Fixed Chimney Bull Trench Kiln

Total 65 Nos. brick kilns are proposed to be monitored on three different days during one cycle, with triplicate sampling in each monitoring, thus, totaling to 585 samples during the entire study.

Both initial and mid firing period monitoring will be performed in the brick kilns which are yet to start operation, whereas only mid firing period monitoring will be performed in the brick kilns which are already operating.

03 months' time will be needed, to complete the monitoring of 65 brick kilns as per above monitoring matrix.

As per information provided by SPCBs, there are total 3278, 2854 and 19003 brick kilns in Haryana, Punjab and Uttar Pradesh respectively, out of which 1918, 701 and 1343 brick kilns have been converted to Zig-Zag technology. With regard to NCR regions, out of 2187, 2216 and 251 brick kilns in Haryana, Uttar Pradesh and Rajasthan respectively, 1504, 1032 and 127 brick kilns have been converted to Zig-Zag technology.

Brick Kilns based on Zig-Zag technology using agro-residues are located only in NCR districts.

Different types of activities with potential of air pollution, including operation of brick kilns in Delhi-NCR are regulated through a Graded Response Action Plan (GRAP) by Environmental Pollution Control Authority. As per GRAP, Brick kilns in NCR are required to be shut under severe conditions i.e when $PM_{2.5}$ and/or PM_{10} concentration goes beyond $250 \mu\text{g}/\text{m}^3$ and/or $430 \mu\text{g}/\text{m}^3$ respectively.

In view of the expected higher concentration of PM emissions during winter months, brick kilns in the NCR regions were kept closed during this period as per directions of EPCA. However, now, looking into the forecast of favourable meteorological conditions and expected improvement in the air quality, Environmental Pollution Control Authority (EPCA) has directed that operation of those brick kilns in NCR districts, which have converted to Zig-zag technology, be allowed, vide letter No. EPCA-R/2020/L-09 dated February 14, 2020 (Copy enclosed as Annexure-I).

Further, air quality data of 2019 in NCR, was examined. Analysis indicated that $PM_{2.5}$ concentration in summer months (March-June) is lower (Average $80 \mu\text{g}/\text{m}^3$) in comparison to winter months (Average $173 \mu\text{g}/\text{m}^3$). Similarly, PM_{10} concentration in summer months (March-June) is lower (Average $219 \mu\text{g}/\text{m}^3$) in comparison to winter months (Average $283 \mu\text{g}/\text{m}^3$).

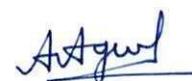
The past data of 2019 w.r.t. PM₁₀ & PM_{2.5} concentration in Delhi, is summarized in **Table 1**:

Table 1 : Monthly data of CAAQMs w.r.t. PM Concentration for 2019, in Delhi

Month	PM _{2.5} , µg/m ³	PM ₁₀ , µg/m ³
January	203	322
February	122	215
March	83	184
April	83	236
May	89	247
June	63	209
July	47	143
August	35	85
September	40	98
October	128	247
November	202	312
December	209	316

Therefore, in view of submission that 65 Nos brick kilns are proposed to be monitored in both NCR and Non-NCR regions, involving total 585 stack emissions' samples, in compliance of the directions of Hon'ble NGT in the matter of O.A. No. 1016/2019 and O.A. No. 1088/2018, it is humbly prayed as under:

- I. Brick Kilns based on Zig-Zag technology using agro-residues are located only in NCR districts and if these are to be monitored to assess the performance of brick kilns operating on agro-residues, under comparable situations, the Zig-Zag type brick kilns in NCR regions, which are presently closed, may have to be made operational, to facilitate monitoring.
- II. Atleast 04 months' time period may be granted to CPCB, for Monitoring of 65 brick kilns in NCR and Non-NCR regions and submission of report covering i) Impact of brick kilns operation on loss/degradation of top soil, ii) study involving Carrying Capacity Assessment of brick kilns with adequate samples in terms of number of brick kilns and days for which monitoring be conducted, iii) Evaluation of the performance of brick kilns against the background concentration and carrying capacity of the area and iv) Impact on Brick Kilns operation on ambient air, in the matters of O.A. No. 1016/2019 and O. A. No. 1088/2018, after commencement of operation of brick kilns in NCR regions.



Ajay Aggarwal
Scientist 'E', CPCB, Delhi

Date: March 04, 2020

**ENVIRONMENT POLLUTION (PREVENTION & CONTROL) AUTHORITY
for the National Capital Region**

**Dr. Bhure Lal
Chairman**

**EPCA-R/2020/L-09
February 14, 2020**

Dear Madam,

This is further to directions on the implementation of the Graded Response Action Plan (GRAP), which has been notified by the Ministry of Environment, Forests and Climate Change (MoEF&CC) on January 12, 2017.

EPCA has been advised by Task Force on Graded Response Action Plan, which is chaired by the member secretary of the Central Pollution Control Board that the coming period is expected to be better in terms of air quality as there is forecast of strong winds and also temperatures are expected to rise from February 15, 2020 onwards. However, the region is expected to stay in the 'Moderate/ poor' category in terms of air quality and, therefore, all efforts have to be made to ensure that the levels do not rise further and that we are able to bring down pollution in the coming days, as weather improves.

Based on this forecast and prediction, EPCA has decided that the remaining measure put into place for the very poor/severe category of GRAP from October 15, 2019, would be lifted. In this case, the following measure is lifted:

1. **Ban on the use of diesel generator sets (other than exclusion/emergency services) in Delhi and in vicinity towns – Ghaziabad, Noida and Greater Noida, Faridabad and Gurgaon, Sonapat, Panipat, Bahadurgarh.**

However, the following measures need to be prioritized as air quality is still in the poor/moderate category and all efforts must be made to improve this:

1. **Continue to take stringent enforcement action and implement the Hot Spot plan, as cleared by EPCA in the following identified areas:**
 - a) **Delhi:**
1. Okhla phase 2, 2. Dwarka, 3. Ashok Vihar, 4. Bawana, 5. Narela, 6. Mundka, 7. Punjabi Bagh, 8. Wazirpur, 9. Rohini, 10. Vivek Vihar, 11. Anand Vihar (including Mandoli), 12. R K Puram, 13. Jahangir Puri, 14. Mayapuri
 - b) **Haryana:** 1. Faridabad 1 and 2, 2. Bahadurgarh, 3. Gurgaon (including Udyog Vihar);
 - c) **UP:** Sahibabad.
 - d) **Rajasthan:** Bhiwadi.

Ensure that there are no instances of waste and garbage burning; that there is full compliance with approved fuel notification and that there is no pollution from stacks and that there is all effort made to mitigate all sources of pollution.

2. On those brick kilns, which have converted to zigzag technology will be allowed to operate in all NCR districts. This requires enforcement as EPCA has noted and brought to your attention, non-compliant brick kilns that continue to operate in violation of these directives.

Cont...2

Central Pollution Control Board

Parivesh Bhawan, East Arjun Nagar, Near Karkardooma Courts, Shahdara, Delhi 110 032
Tel/Fax: 22301955 (CPCB), Tel: 43102414 Dr. Bhure Lal, Chairman

**ENVIRONMENT POLLUTION (PREVENTION & CONTROL) AUTHORITY
for the National Capital Region**

-: 2:-

3. All Stone Crushers/RMC plants/Hot mix plants generating dust pollution should install dust control measures. Please note that as per the previous direction, stone crushers, hot mix plants, and ready-mix plants may be allowed to operate during 6:00 AM to 6:00 PM. CPCB task force has recommended that this restriction continue. Please ensure enforcement of this restriction in the time of use of these dust-generating activities.

4. Direct mechanized sweeping machines for regular cleaning of roads/streets in shifts both day and night. Sprinkle water and take other necessary measures to control dust from roads.

5. In addition, ensure that all steps continue to be taken, as listed in the 'moderate/good category of GRAP to stop garbage burning and dust pollution, including dust from construction sites.

6. The states of Haryana and UP are also directed to submit plan for status of compliance of power plant to meet 2017 standard by 2019 as submitted to MOEF&CC. Based on this EPCA will consult MoEF&CC on the deterrence needed in case of non-compliance/delay in compliance by these power plant this winter.

Let me once again emphasize the need for strict enforcement of actions. This requires ground-level monitoring on a continuous basis by respective and designated officials and strict action to ensure compliance.

You are requested to immediately take steps to ensure compliance of these directions.

Yours faithfully,

(BhureLal)
Chairman, EPCA

To
Smt. Keshni Anand Arora, IAS,
Chief Secretary, Govt. of Haryana

Copy to:

1. Smt. Dheera Khandelwal, IAS, Additional Chief Secretary to Govt. Haryana, Environment Department and Climate Change Department.
2. Shri. Ashok Kheterpal, IAS, Chairman, Haryana State Pollution Control Board
3. Shri. S. Narayanan, IFS, Member Secretary, Haryana State Pollution Control Board.

Central Pollution Control Board

Parivesh Bhawan, East Arjun Nagar, Near Karkardooma Courts, Shahdara, Delhi 110 032
Tel/Fax: 22301955 (CPCB), Tel: 43102414 Dr. Bhure Lal, Chairman

Item Nos. 02 & 03

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 1016/2019
(I.A. No. 750/2019, I.A. No.752/2019, I.A. No. 753/2019, I.A. No.
754/2019, I.A. No. 764/2019, I.A. No. 765/2019, I.A. No. 766/2019,
I.A. No. 767/2019, I.A. No. 21/2020, I.A. No. 22/2020, I.A. No.
37/2020, I.A. No. 60/2020 & I.A. No. 61/2020)

WITH

Execution Application No. 07/2020

In

O.A. No. 1016/2019

Utkarsh Panwar

Applicant(s)

Versus

Central Pollution Control Board & Ors.
With

Respondent(s)

Utkarsh Panwar

Applicant(s)

Versus

Rahul Sharma, Deputy Commissioner
Rohtak & Ors.

Respondent(s)

Date of hearing: 30.01.2020
Date of uploading on the website: 06.02.2020

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S.P WANGDI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER
HON'BLE MR. SIDDHANTA DAS, EXPERT MEMBER

ORDER

1. Question for consideration is permissibility of brick kilns in NCR till end of February 2020 or till level of air pollution becomes normal. A report was sought from CPCB about the impact of running of brick kilns in NCR, including those run by Zig-zag technology. The report filed on 13.12.2019 furnished by CPCB was considered by this Tribunal on 18.12.2019 to the effect that even brick kilns operated by

the Zig-zag technology had adverse impact on air quality in view of overall fugitive dust emissions. The Tribunal accordingly directed as follows:

"4. In view of the above, while CPCB may conduct further study for assessment of different types of brick kilns with reference to source emissions from different types of fuels, having regard to the conclusion that average fugitive SPM values are almost same in FCBTK and Zig-Zag brick kilns, the interim order directing closure of brick kilns in NCR will continue till the next date. Thereafter, brick kilns in NCR may be allowed only consistent with the carrying capacity and siting criteria, subject to GRAP, consent conditions and background concentration of ambient air quality."

2. In view of above, report dated 28.01.2020 has been filed by CPCB which covers not only the present matter but also O.A. No. 1088/2018, Dinesh Chahal Vs. UOI. The said matter is being dealt with by a separate order passed today on the question whether without carrying capacity, it was permissible to permit FCBTK technology kilns in non-NCR region. In the said order, it has been observed:

"6. It is acknowledged in the report of joint Committee that stack emissions are less in case of kilns operating on Zigzag technology, compared to the kilns operating on FCBTK technology on the same fuels. The report further mentions that introduction of FCBTK technology using agro-residue may be done only after carrying capacity assessment of specific area, covering estimation of total existing PM load, assimilative capacity with regard to PM and supportive capacity with regard to PM. Further, in view of large number of brick kilns operating in the area, besides carrying capacity issue with regard to ambient air, there are issues with regard to environmental degradation on account of operation of such large number brick kilns having potential for loss of productive top soil which takes thousand of years to form and is a prime factor which determines agricultural productivity.

7. For the above reasons, while the life of impugned order dated 07.12.2018 passed by the Director, Food, Civil supplies and Consumers Affairs, Government of Haryana has expired, question whether FCBTK technology can be allowed in non-NCR region of Haryana by using agri-residue will be determined in the light of further report as to the carrying capacity of the area in the light of potential for impact on the air quality of the area and

on NCT Delhi specially during the winter months and degradation of top soil.

8. Accordingly, let the carrying capacity study which has adequate samples in terms of number of brick kilns and days for which the emissions monitored be conducted covering the impact on ambient air and the loss of top soil. Such study may particularly assess the permissible number of brick kilns and technology to be used for the same in the non-NCR region. Let further report in the matter be furnished by the Member Secretary, CPCB by 31.03.2020 by e-mail at judicial-ngt@gov.in."

3. Since brick kilns can be permitted only after ascertaining the carrying capacity as above, let a report about carrying capacity of the NCR region in above terms be furnished by CPCB before the next date by e-mail at judicial-ngt@gov.in.

List again on 05.03.2020.

Adarsh Kumar Goel, CP

S.P Wangdi, JM

Dr. Nagin Nanda, EM

Siddhanta Das, EM

February 06, 2020
O.A. No. 1016/2019 with
Execution Application No. 07/2020
DV

Item No. 01

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 1088/2018
(I.A. No. 98/2019, I.A. No. 100/2019, I.A. No. 101/2019,
I.A. No. 119/2019 & I.A. No. 266/2019)

Dinesh Chahal & Ors.

Applicant(s)

Versus

Union of India & Ors.

Respondent(s)

Date of hearing: 30.01.2020
Date of uploading on the website: 06.02.2020

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S.P WANGDI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER
HON'BLE MR. SIDDHANTA DAS, EXPERT MEMBER

ORDER

1. Question for consideration is the validity of the order issued by the Director, Food, Civil supplies and Consumers Affairs, Government of Haryana, Chandigarh – Respondent No. 3 extending time limit for adoption of Zig-zag Technology for running of the brick kilns beyond NCR area upto 31.07.2019, without any scientific study on carrying capacity for such activity and without any safeguards. Further question which has emerged during the proceedings is permissibility of FCBTK technology kilns, using agro fuel. Issue of permissibility even of Zig-zag technology kilns in NCR region on account of adverse impact on air quality is being dealt with by a separate order in O.A. No. 1016/2019.

2. The matter was considered on 30.04.2019 as follows:

“2. Case of the applicant is that air pollution is causing deaths and diseases and to remedy the situation, the Central Pollution Control Board (CPCB) directed adoption of Zig Zag Technology on 30.12.2015 for NCR. Similar order was passed by the Environmental Pollution (Prevention and Control) Authority (EPCA) asking the NCR States to use Zig Zag Technology for brick kilns in the light of the order of the CPCB. However, without any study or safeguards for the norms under the Air (Prevention and Control of Pollution) Act, 1981 (Air Act), the Food and Supply Department, State of Haryana allowed the conventional brick kilns to operate in non-NCR Region, contrary to the decision of the State of Haryana itself requiring improved emission technology to be used for operating the brick kilns.

3. Vide order dated 07.01.2019, while issuing notice, this Tribunal stayed the operation of the order of the Director, Food, Civil supplies and Consumers Affairs, Government of Haryana, Chandigarh. The matter was again considered on 21.02.2019 with reference to the contention that the impugned order was only for Non-NCR to which order of CPCB or EPCA did not apply. The Tribunal held that even in Non-NCR, Standards of Ambient Air Quality laid down under Section 17 (g) of the Air Act are required to be followed. If the impugned order has been passed without undertaking any study on status of ambient air quality without any carrying capacity assessment to take the additional load at concerned areas and without any safeguards on 'Precautionary' principle, the same may not be justifiable having regard to the acknowledged adverse impact of operation of the brick kilns on the ambient air quality. Reference was made to the Judgements of the Hon'ble Supreme Court in *M.C. Mehta v. Union of India*, (1998) 9 SCC 149, *M.C. Mehta v. Union of India* (2000) 7 SCC 422, *M.C. Mehta v. Union of India*, (2002) 4 SCC 378, *K. Guruprasad Rao v. State of Karnataka*, (2012) 12 SCC 736 wherein the Hon'ble Supreme Court directed closure or shifting of brick kiln industries and *M.C. Mehta v. Union of India*, (2001) 9 SCC 235 laying down that brick kilns may be allowed to operate after studying the impact on human population and vegetation. The State of Haryana sought time to show whether any exercise was undertaken as per the 'Precautionary' principle of environment while passing the order. The interim order was allowed to continue.

4. **An affidavit has been filed by the State of Haryana on 04.04.2019 which does not show any study having been undertaken except to say that the CPCB has proposed that conventional brick kilns using agricultural residue should be allowed and that conversion to Zig Zag Technology will lead to financial hardship and inflation in the market.**

7

5. I.A. No. 98/2019 has been filed by certain brick kilns for variation of interim order. The application states that brick kilns have been granted Consent to Operate and have constructed stack height of 30 meters which itself was adequate safeguard. There is no justification for requirement of Zig Zag technology beyond the NCR and direction be given for use of crop residue as suggested by CPCB.
6. The application was directed to be considered along with the main case. I.A. No. 266/2019 was filed for early hearing in the light of the order of the Hon'ble Supreme Court dated 15.03.2019 to consider whether the interim order needs to be varied. On 12.04.2019, the CPCB took time to take instructions. However, no affidavit has been filed by the CPCB so far.
7. Thus, the question for consideration is whether on 'Precautionary' principle, any study of ambient air quality is required for permitting operation of brick kilns in the State of Haryana. This led to earlier decision of the Government restricting running of brick kilns in Punjab and Haryana except by using Zig Zag technology. Impugned order relaxed this requirement.
8. Learned counsel for the applicant submits that in absence of an expert study with regard to the status of ambient air quality and **carrying capacity assessment, the impact of running brick kiln in the impugned order permitting all brick kilns to operate upto 31.07.2019 in non-NCR area is not justified.** Learned counsel for respondents submitted that conventional brick kilns using crop residue may be allowed. It was also submitted that this Tribunal has no jurisdiction as interference by the Tribunal amounts to exercise of power of 'judicial review.'
9. We are satisfied that in absence of any study in spite of orders of this Tribunal dated 21.02.2019, it will be hazardous to permit operation of the brick kilns in view of acknowledged adverse impact on the air quality. At the same time, we direct the State of Haryana and the CPCB to undertake study of air quality carrying capacity assessment and impact of operation of the conventional brick kilns using agri-residue at the earliest and furnish a report to this Tribunal. CPCB will be the nodal agency. If burning of crop residue helps the situation, the same may be studied and report submitted. Mechanism be suggested to ensure that only crop residue is used for firing when conventional brick kilns are operated. We note that impugned order is not limited to kilns using crop residue. The order applies to every kiln without any restriction or safeguard. The same will have to be modified to that extent.
10. As regards the objection raised on behalf of the affected brick kilns that this Tribunal has no jurisdiction in the

matter in view of the judgement of the Hon'ble Supreme Court in Tamil Nadu Pollution Control Board v. Sterlite Industries, AIR 2019 SC 1074, we do not find any merit in the submission. The operation of the brick kilns impacting air quality raises a substantial question of environment and for protection of environment, this Tribunal has jurisdiction to pass orders under Section 15 of the NGT Act which also includes power to issue interim order. While Tribunal may not exercise 'judicial review' jurisdiction of High Court and Supreme Court, jurisdiction under Sections 14, 15 and 20 of the NGT Act, 2010 can certainly be exercised. Otherwise setting up of Tribunal will have no purpose.

List for further consideration on 15.05.2019 in the light of expert study to be produced by the State of Haryana/CPCB. This date is being subject of report of expert Committee being received. If giving report takes more time, the date will have to be extended."

3. Thereafter, the matter was again considered on 30.07.2019 and it was observed:

*"4. The report furnished today by the CPCB is not adequate in terms of the order of this Tribunal. Realizing this state of affairs, learned Counsel for the CPCB as well as the officers of the CPCB who are present seek further time to file a proper report which may enable this Tribunal to assess the information whether such **brick kilns can be allowed by using crop residue or otherwise, apart from the brick kilns operating by using zig zag technology.***

5. The study may be carried out in comparable area. It is stated that the study requires three months. The CPCB may in its report indicate the location/area and names of the brick kilns where study has been carried out.

6. Though operation of order was only till 31.07.2019 which was stayed by this Tribunal, the studies may still be helpful for regulating the working of brick kilns."

4. Accordingly, further report dated 22.01.2020 has been filed by the CPCB. The report does not mention the carrying capacity of the area in question i.e. non-NCR area in the State of Haryana. Though such capacity in respect of Suratgarh area, Distt. Sriganganagar has been assessed and found to be negative. The relevant portion of report is given below:

<p>Estimation of total existing PM10 Load in Suratgarh Area, Rajasthan during</p>
<p>study period:</p>
<p>Total area of Suratgarh in Km²: 2827.56 (Ref.: District census Handbook, Ganganagar, 2011, Directorate of Census Operations, Rajasthan) Mixing Height of Air in Suratgarh in Km: 1.066154 (Ref: Since site specific mixing heights were not available, mixing heights based on IMD Publication "Atlas of Hourly Mixing heights and Assimilative Capacity of Atmosphere in India", was considered. No air modeling was done in this study to calculate the mixing height) Total Volume of Air in Suratgarh in Km³: 2827.56 x 1.066154 = 3014.614 Average measured PMio Concentration of Ambient Air in Suratgarh Area (Ref: Table 8: Ambient Air Quality Results; S.No, 5 & 6) during study period: 523 pg/m³ i.e. 523 Kg/Km³ Therefore, Total estimated load of particulate matter (PM to) in ambient air of Suratgarh Area: (3014.614 x 523)/1000= 1576.64 MT</p>
<p>Estimation of Assimilative Capacity w.r.t. PMT in Suratgarh Area,</p>
<p>Total area of Suratgarh in Km²: 2827.56 (Ref.: District census Handbook, Ganganagar, 2011, Directorate of Census Operations, Rajasthan) Mixing Height of Air in Suratgarh in Km: 1.066154 (Ref: Since site specific mixing heights were not available, mixing heights based on IMD Publication "Atlas of Hourly Mixing heights and Assimilative Capacity of Atmosphere in India", was considered. No air modeling was done in this study to calculate the mixing height) Total Volume of Air in Suratgarh in Km³: 2827.56 x 1.066154 = 3014.614 Particulate Matter (PMio) required to keep Ambient air quality at Satisfactory Level: 100 pg/M³ i.e 100 Kg/Km³ (Ref: Air Quality Index) Therefore, Assimilative Capacity w.r.t PMio in ambient air of Suratgarh Area: (3014.614 x 100)/1000= 301.46 MT</p>
<p>Estimation of Supportive Capacity w.r.t. PMio in Suratgarh Area, Rajasthan</p>
<p>during study period:</p>
<p>Total estimated load of PMio in ambient air of Suratgarh Area during study period: 1576.64 MT Assimilative Capacity w.r.t PMio in ambient air of Suratgarh: 301.46 MT Supportive Capacity = Assimilative Capacity - Total Estimated Load Therefore, Supportive Capacity w.r.t. PMio in ambient air of Suratgarh Area: 301.46-1576.64 = 1275.18 MT</p>

5. The other issue dealt with is whether brick kilns can be allowed by using crop residue as a substitute for Zig-zag technology. The observations and conclusions drawn in the report are non-conclusive and cannot be relied upon in terms of small data base of sample size and number of days for which the sampling has been carried out. Besides, more brick kilns in each category should have been covered to avoid statistical errors in decision making. The performance of

brick kilns is required to be evaluated against the background concentration and carrying capacity of the area. Comparison in the report has been made with incomparable situations, as was explained during the course of hearing. From the data made available by the joint Committee it is evident that particulate emissions for Zig-zag kilns using coal as a fuel is much lower than brick kilns operating on FCBTK technology using agro-residue as a fuels both with regard to initial firing and mid firing situations. Further, emission levels also vary quite significantly amongst different fuel types under agro-residue category. Further justification of impact of higher PM concentration during initial firing has no scientific logic. The joint Committee has erred in concluding that the impact of higher PM concentration during initial firing may not be significant when overall operation of any brick kiln for a particular season is considered.

6. It is acknowledged in the report of joint Committee that stack emissions are less in case of kilns operating on Zig-zag technology, compared to the kilns operating on FCBTK technology on the same fuels. The report further mentions that introduction of FCBTK technology using agro-residue may be done only after carrying capacity assessment of specific area, covering estimation of total existing PM load, assimilative capacity with regard to PM and supportive capacity with regard to PM. Further, in view of large number of brick kilns operating in the area, besides carrying capacity issue with regard to ambient air, there are issues with regard to environmental degradation on account of operation of such large number brick kilns having potential for loss of productive top soil which takes thousand of years to form and is a prime factor which determines agricultural productivity.

7. For the above reasons, while the life of impugned order dated 07.12.2018 passed by the Director, Food, Civil supplies and Consumers Affairs, Government of Haryana has expired, question whether FCBTK technology can be allowed in non-NCR region of Haryana by using agri-residue will be determined in the light of further report as to the carrying capacity of the area in the light of potential for impact on the air quality of the area and on NCT Delhi specially during the winter months and degradation of top soil.

8. Accordingly, let the carrying capacity study which has adequate samples in terms of number of brick kilns and days for which the emissions monitored be conducted covering the impact on ambient air and the loss of top soil. Such study may particularly assess the permissible number of brick kilns and technology to be used for the same in the non-NCR region. Let further report in the matter be furnished by the Member Secretary, CPCB by 31.03.2020 by e-mail at judicial-ngt@gov.in.

List again on 14.04.2020.

Adarsh Kumar Goel, CP

S.P Wangdi, JM

Dr. Nagin Nanda, EM

Siddhanta Das, EM

February 06, 2020
O.A. No. 1088/2018
DV