

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
WESTERN ZONE BENCH, PUNE
Original Application No.77/2024(WZ)
[Earlier Letter Petition No.40/2024(WZ)]

**Report on behalf of the Maharashtra Pollution Control
Board(MPCB) in compliance of the Order dated 6/5/2024
passed by this Hon'ble NGT**

1. The Applicant Dr.Mamta Samir Shirali, Manav Classic, Opp. Shanti Dham Pranthanalaya, Shimpoli Road No. 5, Borivali (W), Mumbai has submitted a complaint dated 4/3/2024 before this Hon'ble NGT, which is registered as Original Application bearing No. 77/2024 (WZ) alleging that the authorities responsible for running new crematorium at Borivali (West), Babhai/Vazira Naka as well as Municipal Corporation of Greater Mumbai (MCGM) have not taken cognizance of the fact that the said crematorium is located in the middle of the residential area though the same is electric/PNG crematorium, huge gas is emanating out of it in the surrounding area. Also, lot of obnoxious gases are released from the same affecting the health of the nearby residents.
2. In the said matter, the Hon'ble NGT vide order dated 06/05/2024 directed the Maharashtra Pollution Control Board (MPCB) to submit a report with respect to the truthfulness of the contents of the aforesaid complaint and the action taken at their end, if any.

3. In compliance of the order dated 06/05/2024 passed by this Hon'ble NGT, the Officials of the Maharashtra Pollution Control Board (MPCB) at Mumbai alongwith MCGM visited to the Crematorium site located at plot bearing No.277, 7ps at Ram Mandir Road, Bhabhai, Borivali (W), Mumbai in R/C ward on 03/06/2024 and observed as follows :

- i) The said crematorium is PNG gas fired crematorium.
- ii) MCGM officials reported that, the said crematorium started its operations from 16/05/2021. MCGM has outsourced construction, operation & maintenance of the said crematorium to M/s.Ador Welding Ltd, Pune.
- iii) During visit it was observed that, the said crematorium have two numbers of cremation furnaces. The said cremation furnace have single chamber with refractories, heat exchanger and further connected to wet scrubber & stack having height 30.5 meter.
- iv) PNG is supplied by Mahanagar Gas Ltd.
- v) The cremation furnace is provided two nozzles of PNG gas. It was reported that, they have maintained temperature of furnace @ 700⁰C during burning of the body and time period upto 2 hrs or period depends upon size of the body. Emission is observed from the stack connected to Cremation furnace.
- vi) ETP is provided for effluent generation from scrubber.
- vii) Residential building , one garden and one Shanti Dham Prarthanalay was found near the compound wall of the said Crematorium.

It reveals from the Ambient Air quality Monitoring results that the ambient levels are marginally exceeding for parameter PM₁₀ compared with National Ambient Air Quality Standards, 2009. Further, there are considerable amount of VOCs like Toluene, Ethyl Benzene, Xylenes & Benzene present in the ambient air. The presence of VOCs, marginally exceeded PM₁₀ in ambient air could be due to various reasons like vehicular pollution, road & associated infrastructure pollution, traffic congestion, burning of dead bodies in Crematorium. A copy of the visit report dated 03/06/2024 is enclosed herewith and marked as an **Annexure-‘I’**.

4. As per Schedule-II of the Bio-medical Waste Management Rules, 2016, the temperature of the incinerator primary chamber shall be a minimum of 800⁰C and the secondary chamber shall be minimum of 1050⁰C + or - 50⁰C. MCGM is burning dead bodies in a single chamber crematorium with temperature set at about 700⁰C, which leads to incomplete burning. Further, there is use of ghee as per rituals of Hindu traditions, which may emit VOCs in the said premises. MCGM have installed single chamber wet scrubber with water as scrubbing media to limit emissions / off gases generating after burning of dead bodies.
5. In view of the above non-compliances, MPCB vide letter dated 10/6/2024 directed MCGM to upgrade existing scrubbing system provided to furnace with three column scrubber and scrubbing media as acidic type, alkaline type,

viii) Existing wood fired crematorium was found not in operation . It was reported that the said crematorium is under major civil repair work.

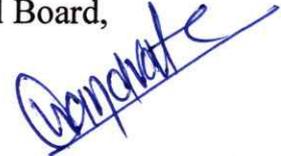
The official of MPCB has carried Ambient Air Quality Monitoring for 24 hours through mobile van on 03/06/2024 in the premises of crematorium. The results of Ambient Air Quality Monitoring are as as below:

| Date | Time | PM10 ug/m3 | PM2.5 ug/m3 | SO2 ug/m3 | NO2 ug/m3 | CO ug/m3 | Benzene ug/m3 |
|--|---------------------------------|---------------|----------------|--------------|--------------|-------------|------------------|
| 03/06/2024 to 04/06/2024 | 13.00 hrs to 12.00 hrs | 133.16 | 53.10 | 10.93 | 8.87 | 0.46 | 2.68 |
| National Ambient Air Quality Standards 2009 | | 100 | 60 | 80 | 80 | 04 | 05 |

| Date | Time | OZONE ug/m3 | Toluene ug/m3 | Ethylbenzene ug/m3 | M+P Xylene ug/m3 | OXYlene ug/m3 |
|--|---------------------------------|----------------|------------------|-----------------------|------------------------|------------------|
| 03/06/2024 to 04/06/2024 | 13.00 hrs to 12.00 hrs | 31.55 | 13.65 | 7 | 8.87 | 0.46 |
| National Ambient Air Quality Standards 2009 | | 100 | -- | -- | -- | -- |

finally with water, to redesign crematorium technically so as to achieve burning temperature between 1000°C to 1100°C, to revamp existing crematorium by designing through the institutes like IIT /NEERI by considering various factors like residential time, design of burning chamber, details of air / water pollution control equipments to mitigate air pollution problems and associated nuisance. A copy of the MPCB's letter dated 10/6/2024 addressed to MCGM is enclosed herewith and marked as an **Annexure-'II'**.

For and on behalf of
Maharashtra Pollution
Control Board,



(A. S. Nandvate)

Sub-Regional Officer, Mumbai-IV

Place : Mumbai
Date : 24/06/2024

MAHARASHTRA POLLUTION CONTROL BOARD
Sub Regional Office, Mumbai-IV

Tel. No. 022-24010437
 Fax No. 022-24020781
 Visit us at : <http://mpcb.gov.in>
 Email : sromumbai4@mpcb.gov.in



Kalptaru Point 1st floor,
 Sion Matunga Scheme Road No. 8,
 Opposite Sion Circle,
 Sion (E),
 Mumbai - 400 022.

"Your Service is our Duty"

Name & Address of Industry :

Date of Visit :

Visited By- :

Contact Person- :

Contact No :

Consent Status :

Observations

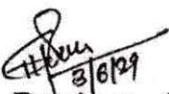
Investigation Report

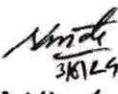
In compliance of Honorable National Green Tribunal, Western Zone, Bench, Pune order dt. 06/05/2024 in O.A. No. 77 of 2024 (WZ) visit carried out to crematorium located at plot bearing 277, TPS at Ram mandir Road, Bhabhai, Borivali (W) in RLC ward on 03/06/2024 with BMC officers. During visit following observations are made.

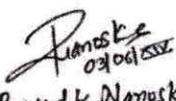
- 1) The said crematorium is PNG gas fired crematorium.
- 2) It was reported by BMC officials that, said crematorium started from 16/05/2024.

P.T.O

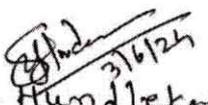
- 3) It was reported that, BMC has outsource construction, operation & maintainance of said Crematorium to M/s. Ador welding Ltd, Pune.
- 4) During visit it was observed that, said Crematorium having two numbers of cremation furnaces. Said cremation furnace having ~~single~~ single chamber with refractories, heat exchanger and further connected to wet scrubber and stack having height 30.5 meter.
- 5) PN₄ supplied by mahanager gas Ltd.
- 6) During visit it was observed that, cremation furnace provided two nozzels of PN₄ gas. It was reported that, they have maintainance temperature of furnace @ 700°C during burning of body and time period upto 20 2 hrs. depend upon size of body.
- 7) Ambient air quality monitoring through mobile Van is started on 3/06/2024 for 24 hrs monitoring.
- 8) Emission observed from stack connected to cremation furnace.
- 9) Residential building, one garden and one shanti Dharm pathshala found near compound wall of said crematorium.
- 10) Existing wood fired crematorium found not in operation, it was reported that said crematorium is under major civil repairs work.
- 11) Provided ETP for effluent generated from scrubber.


3/6/24
S.N. Bankar
SEC (M&E) WS


3/6/24
N.H. Vinde
AE (M&E) up


03/06/2024
Shri Prasad K. Namaskar
Sr. S.E. Health,
R/C ward


03/06/24
Jayant D. Shirpat
E.E (M&E) WS-7


3/6/24
C.S.T. Humdiker
F.O, MPCB
Gen-TN Mumbai

Investigation report

Dtd. 03/06/2024.

In compliance of Hon'ble National Green Tribunal western zone, Bench, Pune order dated 06/05/2024 in O. A. No. 77 of 2024 (WZ) visit carried out to crematorium located at plot bearing 277, 7 ps at Ram mandir Road, Bhabhai, Borivali (W) in R/C ward on dated 03/06/2024 with BMC officers. During visit following observation are made

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(S.N.Bankar)
SE(M & E)WS
BMC

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(N.H. Vinde)
AE(M & E)WS
BMC

-sd-

(Prasad K. Nanoskar)
Sr. S.I. Health
BMC

-Sd-

(Jayant D Shirsat)
EE(M & E) WS
BMC

-Sd-

(S.Y.Hundlekar)
Field Officer
SRO MUMBAI-4
MPCB

Maharashtra Pollution Control Board

Sub-Regional Office, Mumbai-IV

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Email : sromumbai4@mpcb.gov.in



Kalptaru Point 1st floor,
Sion Matunga Scheme Road No. 8,
Infant of Sion Cercal, Sion (E),
Mumbai – 400 022.

No./MPCB/SROM-IV/ 1517

Date 06/06/2024

To,
Assistant Commissioner - R/C ward
Municipal Corporation of Greater Mumbai
F.P.No.-44, TPS No-1, Chandawarkar Road,
Borivali (W), Mumbai-400092
Ac.rc@mcgm.gov.in

Sub : Compliance of order dated 06/05/2024 passed by the Hon'ble NGT,
WZ, Pune in Original Application No.77/2024(WZ).

Sir,

Dr.Mamta Samir Shirali, R/o 1, Manav Classic, Opp.Shanti Dham Prarthanalaya, Shimpoli Road No. 5, Borivali (W), Mumbai has made a complaint dated 04/03/2024 to the Hon'ble National Green Tribunal, Western Zone, Pune, which is registered as Original Application bearing No.77/2024(WZ), wherein it is alleged that, "the authorities responsible for running new crematorium at Borivali (West), Babhai/Vazira Naka as well as Municipal Corporation of Greater Mumbai (MCGM) have not taken cognizance of the fact that the said crematorium is located in the middle of the residential area though the same is electric/PNG crematorium, huge gas is emanating out of it in the surrounding area. Also, lot of obnoxious gases are also released from the same affecting the health of the nearby residents."

In the said matter, the Hon'ble NGT vide Order dtd. 06/05/2024 directed Maharashtra Pollution Control Board and Municipal Corporation of Greater Mumbai (MCGM) to submit report regarding truthfulness of the contents of the aforesaid complaint and the action taken at their end, if any.

In compliance of the Hon'ble NGT Order dated 06/05/2024, the officials of MPCB & MCGM visited the aforesaid site of crematorium at Borivali (West), Babhai/Vazira Naka on 03/06/2024 and observed as follows :-

- i. The crematorium is PNG gas fired crematorium & MCGM officials informed that, the crematorium started its operations from 16/05/2021 and the construction, operation & maintenance of the said PNG crematorium is outsourced to M/s. Ador welding Ltd, Pune
- ii. Residential building, one Municipal Garden & Shanti Dham Prarthanalay is found near the compound wall of the vicinity of said Crematorium.
- iii. The PNG gas for crematorium is being supplied by Mahanagar Gas Ltd.
- iv. Existing wood fired crematorium found not in operation due to major civil & repair work etc.

:2:

- v. The said crematorium having two numbers of cremation furnaces with single chamber constructed with refractories. The off gaseous generated after burning of dead bodies are passed through heat exchanger followed by wet scrubber & finally vented through stack having height 30.5 meter. MCGM have provided Effluent treatment plant consisting of primary & tertiary units for treatment of waste water generated from scrubbing operations.
- vi. The cremation furnace is fitted with two nozzles for firing of PNG gas. It was reported that, temperature of furnace (burning chamber) is being maintained @ 700°C for period up to 2 hrs or period depends upon size of the body. During visit, one of the crematorium furnace was operational & observed emitting white smoke through stack.

The official of MPCB has also carried out Ambient Air Quality Monitoring for 24 hours through mobile van on 03/06/2024 in the premises of crematorium.. It reveals from the Ambient Air quality monitoring reports that the ambient levels are marginally exceeding National Ambient Air Quality Standards 2009 for parameter PM₁₀ and considerable amount of VOCs like Toluene, Ethyl Benzene, Xylenes & Benzene are present in the Ambient Air. The Ambient Air quality Monitoring Results are enclosed for kind perusal.

As per Schedule II of the Bio-medical Waste Management Rules, 2016 "The temperature of incinerator of the primary chamber shall be a minimum of 800°C and the secondary chamber shall be minimum of 1050°C + or - 50°C." MCGM is burning dead bodies in a single chamber crematorium with temperature set at about 700°C, which leads to incomplete burning and use of ghee as per rituals of Hindu traditions, causing smell nuisance in the surrounding area.

In view of the above, you are hereby directed to comply with the following conditions :

1. You shall upgrade existing scrubbing system provided to furnace with three column scrubber & scrubbing media as acidic type, alkaline type , finally with water.
2. You shall technically redesign the Crematorium so as as to achieve burning temperature between 1000°C to 1100°C. Further, you shall define proper residential time for burning of body & off gases emitted thereof.
3. You shall revamp existing crematorium by designing through the Institutes like IIT /NEERI by considering various factors like residential time, design of burning chamber, details of Air / water pollution control equipment's to mitigate air pollution problems & associated nuisance.

Being a planning Authority, you are hereby requested to comply with the aforesaid conditions in order to mitigate the air pollution caused due to the above Crematorium. The Action Taken Report (ATR) along with time bound proposals shall be submitted to MPCB on priority.

DA: Ambient Air Quality Monitoring Reports



(A. S. Nandvate)
Sub-Regional Officer, Mumbai-IV

Copy Submitted to:-

- 1) Joint Director (APC Div) MPC Board, Sion, Mumbai
- 2) Regional Officer (BMW Div) , MPC Board, Sion, Mumbai
- 3) Regional Officer, MPCB, Mumbai.