

## MAHARASHTRA POLLUTION CONTROL BOARD

### Minutes of the meeting

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**Sub:** Minutes of the meeting of the committee constituted to propose suitable guide lines as to whether use of two stroke engine causes any particular additional pollutants and increase of RSPM due to search engines used in auto Rikshaws

**Date & Venue:** 03.04.2014 at 3.00PM, In conference hall, MPCB, Kalpataru Point, Sion (E), Mumbai-22

The committee meeting on above said subjects was held to proposed suitable guidelines for two stroke engines as to whether the use of two stroke engines used in Autorikshas emitting additional pollutants and increases the RSPM level in the Ambient.

The following members were present:

1. V.M. Motghare, Joint Director (APC), MPCB.
2. P.K. Mirashe, Asst. Secretary Tech. MPCB.
3. Dr. (Mrs.) Indrani Gupta, Senior Principal Scientist, NEERI, Mumbai.
4. Ms. Amita Baikerikar, General Manager, ARAI, Pune .
5. S.C. Kollur, Scientific Officer, MPCB.

Joint Director, MPCB has welcomed all the members and read out the TOR of the of committee constituted in view of the Hon'bl NGT (WR) Pune order passed in the application bearing number 32/2014 (WZ). The Hon'ble NGT directed MPCB to submit the affidavit to show whether the use of two stroke engine causes any particular additional pollutants, and increase RSPM due to such engines used in the auto rickshaws. Further, the Hon'ble NGT directed to MPCB explain whether change in fuel used from petrol/Diesel to CNG, would causes change in emissions of pollutants. If so, the nature of such changes in emissions. The affidavit shall also reflect information on two stroke engine of an auto rickshaw would add to RSPM (PM10) in access.

MPCB informed to the committee about the Ambient Air Quality Monitoring is being carried out in the state of Maharashtra at selected locations under the National Ambient Air Quality Monitoring Programme (NAMP) and the observations recorded indicates the overall level of Air Pollution due to various activity such as vehicular movement, construction activities, road dust form bad roads, traffic congestion and other anthropogenic activities. Data generated do not separate out any pollution levels due to particular type of vehicle. It was also

informed that, MPCB is not monitoring vehicular emission and RTO is conducting PUC testing for the vehicles.

JD (APC) requested the expert committee member from NEERI & ARAI to highlight the type of emissions and its levels from two stroke and four stroke engines used in auto rickshaws. He also requested to give their expert opinion whether the two stroke engine will cause more pollution than four stroke engines with respect to Particulate matter(PM)

Representative from ARAI informed that, some studies conducted earlier shows two stroke engine emits more pollutants than the four stroke engines. Generally the two stroke vehicles were fitted with catalytic converter to comply the emission norms prescribed for 2-3 vehicles. She also informed that, emission standards only for CO,HC+NOx parameters are prescribed for petrol driven 2-3 wheelers and PM is not prescribed. However, improper maintenance of the vehicle, use of sub standard lubrication oil causes more emission levels in these vehicles. Further, she added that the two stroke engine emission contains 90% of oil droplets and PM levels from two stroke engines may increase due to retrofitted with CNG/LPG. Four stroke original engines of LPG and CNG emits lesser particulate matter.

Representative from NEERI informed about the CPCB sponsored source Apportionment study for six major cities in India. The study for Mumbai city was carried out by NEERI. The study was aimed at assessment of Air Quality status at different sites at Mumbai, quantification of percentage share of air pollutants emissions from various activities which also includes transportation emissions. She also shared the findings of the study which suggested for better vehicle technology, better maintenance practice, improved traffic management, and improved fuel quality can control the emission levels from vehicles. The emissions load for Mumbai city from all sources including line sources is available with NEERI. However, emission data related to two strokes and four stroke engines are not available.

After detail deliberations the Committee proposed following actions:

1. ARAI, Pune may be requested to carry out fresh study on two stroke and four stroke emissions levels including sizable number of samples in the study. ARAI will submit its proposal to MPCB for conducting the study.
2. MPCB will submit interim report to honorable high court after the detail comments received from ARAI, Pune.
3. Committee suggested to including Dr. Ajay Ojha from Pune as a member of expert committee considering his experience in conducting the source apportionment study in Pune city.

4. MPCB may write to Central Pollution Control Board and ARAI, Pune requesting for their expert opinion in submitting the affidavit to Hon'ble NGT. The Committee also requested MPCB to ensure participation of representation from Transport Commissioner Office in the next meeting as the inventory and statistics related to the two stroke and four stroke vehicles which are presently running on the road and registered with them is available in their office.
5. The committee also suggested to call the vehicle manufacturer particularly, manufactures of two stroke engines to discuss about the engine technique and the statistics of related to the production and sale etc.

Meeting ended with vote of thanks.