Interim Progress Report on Particulate Pollution Control Strategy in Critically Polluted Cities

In Response to the Hon'ble Supreme Court Order Dated August 14, 2003

(**In the matter of W.P.(C) No.13029 of 1985; M.C. Mehta v/s UOI & others**)

November 2003

ENVIRONMENT POLLUTION (PREVENTION & CONTROL) AUTHORITY
FOR THE NATIONAL CAPITAL REGION

A. DIRECTION OF THE HON'BLE SUPREME COURT TO THE ENVIRONMENT PROTECTION (POLLUTION AND PREVEMTION) AUTHORITY

On August 14, 2003, the Hon'ble Supreme Court passed the following direction:

> *"CPCB's report shows that the Respirable Suspended Particulate Matter (in short "RSPM") levels in Ahmedabad, Kanpur, Sholapur, Lucknow, Bangalore, Chennai, Hyderabad, Mumbai and Kolkata are alarming. It has been observed therein that air pollution is a serious problem and, therefore, some measures are required to be taken immediately. It is admitted that most critical form of pollution is Respirable Suspended Particulate Matter (RSPM) and in all the above cities same is in the most critical form. Though the report shows that in Delhi also the level is high, in view of the fact that there has been considerable reduction (when figures of 1996 and 2002 are compared) for the present, the present arrangements for Delhi will continue, until further orders."*
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> *"Issue notices to the States of Maharashtra, Andhra Pradesh, Gujarat, Uttar Pradesh, Karnataka and Tamil Nadu. In the meantime, we direct that the Union of India and the respective States shall draw a plan for lowering the rate of RSPM level in the aforesaid cities. After the plan is drawn, the same would be placed before EPCA. This may be done within a period of two months. We are excluding Mumbai and Kolkata where the respective High Courts are stated to be monitoring the RSPM levels in those cities. EPCA after examining the matter shall submit a report to this Court within a period of four weeks thereafter."*

B. EXAMINATION OF ISSUES

In response to the direction issued by the Hon'ble Supreme Court on August 14, 2003, the EPCA asked the concerned states to submit their action plan to control particulate pollution in the critically polluted cities and to make presentations to the Authority in regard to their action plans. It held extensive discussions with officials of the concerned states.

The cities that have made the first round of presentation to the EPCA include: Kanpur, Luckhnow, Chennai, and Bangalore. Solapur has not presented the action plan yet.

The Authority is dismayed at the delay in submission of reports by the states and the central government. It further takes very strong note of the fact that the Solapur has not reported anything so far with regard to their progress in the matter. They Maharashtra Government has also not responded to the communication from EPCA directed them to make presentation on their action plan.

The official action plan for Hyderabad is also not available for comments. They have sought time to prepare their action plan. The Additional Secretary to Government Forest, Environment, Science & Technology Department Govt of Andhra Pradesh, Hyderabad has informed in the letter dated October 17, 2003, “I invite attention to the reference citied and inform that the Transport Department is yet to receive a copy of the orders of Hon'ble Supreme Court of India giving directions to reduce pollution levels in RSPM to improve ambient air quality. However, the Department is consulting stakeholders, trade, intellectuals and non-governmental organisations and that it will take 10 days to draw final action plan. On finalising the same it will be communicated to you.” The have enclosed a copy of the tentative action plan drawn by an outside expert non-governmental agency.

EPCA would like to point out that it has also included in the proposed list of cities Faridabad, which is adjacent to Delhi and tops the rank based on the total suspended particulate matter. Monitoring of respirable suspended particulate matter (PM10) on the basis of which the Central Pollution Control Board has ranked the other cities had not begun at the time of the Court order. In view of the fact that this city is reported to be highly polluted and is adjacent to Delhi, urgent action is called for in Faridabad as well as the benefits of significant improvement in Delhi can be compromised if similar stringent action plan is not enforced here.

The Authority has analysed the first drafts of reports that have been submitted so far and has found considerable lacunae in the data presented and laxity in the action plans proposed. In addition, the Authority also found that the information presented and the action plans proposed by various states lack uniformity of presentation. Subsequently, EPCA has communicated its analysis of all the reports identifying data gaps. It has also given a common format to all concerned state/city governments (see

annexure 1). The state governments shall submit their final reports in accordance with the new format within a fortnight.

In view of this delay EPCA has decided to submit this interim report to apprise the Hon'ble Supreme Court with regard to the current status of the deliberations and seeks time to submit the final report.

C. EPCA'S OBSERVATIONS

EPCA has analysed all the reports from the state governments submitted to it and would like to make the following observations. Some specific comments are in the annexure II. In the section EPCA would like to make some broad observations with regard to the current weaknesses in the draft action plans:

1. INADEQUATE REPORTING

The air pollution levels, adequacy of air quality monitoring and contribution of different pollution sources to pollution load have not been adequately defined. It is recommended that the air quality data be presented for each monitoring site separately in tabular format, giving the annual and monthly average and maximum and the number of days monitored in the year. If limited monitoring of other air toxins like benzene etc have been conducted data should be provided.

None of the reports submitted indicate if any local emission source inventory for the air pollutants has been conducted for the city. Some cities including Chennai, Lucknow and Kanpur have provided some estimate of emissions load. While Chennai provides the same information as provided by Central Road Research Institute in the auto fuel policy report, the source of estimates provided by Lucknow and Kanpur is not mentioned. The report submitted by Haryana State Pollution Control Board also mentions particulate emissions from the industrial units and vehicles, but does not provide detail as to how this emission load has been worked out.

EPCA is of the view that given the weak air quality planning process in the country it is likely that such a thorough exercise has not been undertaken in many cities of India. But whatever estimates are available or can be computed should be indicated.

EPCA has also noted discrepancy in data reported. Such discrepancy should be taken care of in the final report. For instance, contribution of diesel run commercial vehicles to the total PM load does not look convincing.

All action plans should assess the current air quality monitoring system in the city and the inventory process if exists at all and propose measures to strengthen the air quality monitoring and inventory process in these cities in a time bound manner.

SPECIFIC COMMENTS WITH REGARD TO THE PROBLEMS DEFINED AND ACTIONS PROPOSED FOR DIFFERENT SOURCES OF POLLUTION

I) VEHICLES

The overall comments on the submissions made with regard to vehicular pollution are as follow:

The draft reports have not given adequate data with regard to the actual registered numbers of vehicles, and growth rate and percentage share (by type of vehicles) and trend in fuel consumption (both petrol and diesel) in the cities over ten year time frame.

Do not indicate the key vehicle segments that are expected to be the larger contributor of particulate pollution in the city like commercial vehicles that run on diesel including buses, trucks, other commercial vehicles and diesel run three wheelers and specific action planned for them. It is important to propose vehicle category-wise action plan in terms of tighter emissions and fuel standards for new vehicles, vehicle retirement for in-use vehicles, inspection plan for in-use vehicles, introduction and expansion of alternative fuels etc.

The plans do not assess the effectiveness or weaknesses of the policy measures that have already been implemented or initiated by the state governments like pollution under control certificate programme, inspection of adulteration of automotive fuels etc to indicate what kind of improvements they are seeking for effective results. These programmes should be reported in terms of the scale of application, level of compliance, failure rate, problems with enforcement, institutional requirements to strengthen these programmes etc.

In most cases action points have been listed loosely without stating the specific milestones to be achieved. Nor do these give any detail plan for implementation. For instance, the plans indicate introduction of alternative fuels without indicating their plan of priority vehicles segments to be phased in for alternative fuel applications, or estimate of the demand thereof and the time bound plan to build up infrastructure to cater to that demand. Similarly, PUC is listed as an ongoing action to inspect in-use vehicles. The plans do not indicate how in view of the current weaknesses of the PUC system, more improved and advanced vehicle inspection programme would be phased in a time bound manner.

Most action plans have given if at all, extremely lax time scale for implementation.

Transport planning and public transport fall directly under the purview of the state governments and is a very important area of intervention for air pollution control. But most action plans are either silent or have proposed very feeble actions. Similarly, a range of state taxes that can be effectively utilised to regulate the age and usage of vehicles have not been considered.

EPCA would like to point out that all these issues should be addressed adequately in the final action plans. All state governments must take note of the reporting format that has been indicated in the annexure and provide the details accordingly with supportive information.

Some specific comments on data gaps some draft action plans:

II) INDUSTRY

Even in this sector the information on the number of air polluting industry, their sizes and emissions, and location -- if in residential or commercial/industrial area are very inadequate. In some cases even the unit used for quantity of emissions is also not clear. Where ever data has been presented in cubic metre per second, should be presented according to weight. All emissions data should be presented along with the respective standards.

The reports do not indicate the status of emission control devices and application in industries.

Some cities have not given adequate information regarding industrial units within the city. The final report should give all details on the air polluting industrial units, how many of them are meeting emission norms or how many of these are fitted with air pollution control devices. How many of these units are located in industrial units.

It should also submit data on the source of emission (whether boiler or furnace or cupola etc) boiler capacity, type of fuel used, fuel consumed per day, number of working hours per day, and quantity of emissions of all pollutants (sulphur dioxide, nitrogen dioxide and suspended particulate matter).

III) POWER PLANTS

Some cities like kanpur, Luchnow, Hyderabad, Ahmedabad have not indicated whether these have thermal power plants. Faridabad points out to two coal-based thermal power plants in Badarpur and Faridabad as major emitters. It however does not quantify the amount of fuel consumed at these power plants, the load factor of the plants and the emissions of different pollutants including generation of fly ash. The final report should include this information. Where ever applicable the state governments must indicate the magnitude of the problem from these power plants in terms of emissions and measures already initiated or planned for.

IV) COMMERCIAL AND OTHER SOURCES

Discussions on other sources of air pollution are very inadequate. Even though it is known that in most cities of India generator sets for instance are emerging as major sources of pollution these are not even mentioned. The report should submit data on the number of gensets used, according to capacity and fuel consumed and the amount of fuel consumption.

Similarly, other sources like incinerators, open biomass burning etc should be discussed and detailed out.

2. THE PROPOSED ACTION PLAN TO CONTROL PARTICULATE POLLUTION

EPCA has also analysed the policy measures in the proposed action plan and reached the following conclusions.

Purpose of an action plan

The purpose of an action plan to control particulate pollution is not to take actions on ad hoc basis – as the plans reflect currently, but to reduce the levels of pollution *in a time* bound manner. The plan should reflect the quantity by which pollution levels need to be brought down. Therefore the action plan developed for the cities should enable them to meet the air quality targets set against the National Ambient Air Quality Standards. Thus, the plans should be able to quantify the impact of each measure on the ambient pollution levels as much as possible. Due to absence of a precise emission inventory, none of the plans state whether it will help the critically polluted cities to meet the air quality target. But some assessment of the effectiveness of the proposed action plan is needed to understand how would this help to lower pollution levels.

Action plan for all emission sources

Some reports do not even propose any action plan to reduce emissions from industrial units. For instance, in its report on Bangalore, the Department of Forest, Ecology and Environment of Karnataka does not present any action plan to control emission from industrial unit, despite the presence of 284 air-polluting units in the city. None of the reports present any action plan for controlling emissions from generator sets, though it is well know that these generator sets are rapidly become major sources of emissions. Though some of the reports do mention banning biomass burning, there is no information on the kind of biomass being burned publicly, an estimate of the amount burned and how such a ban is going to work out at the level of implementation.

Timeline for implementation

As a result, the issue of deciding the timeframe to implement emission control measures often take a backseat. The action plans submitted fail to reflect the urgency required to make an impact on the

pollution levels. More often than not, they reflect the convenience of the implementing agency than public health concerns. They almost ignore the fact that measures taken early will have an early impact and thus avoid accumulating pollution load from existing sources.

For example, the report on Kanpur proposes implementation of fly ash utilisation as per government of India norms in 2010. Again, setting up 11 CNG dispensing station is targeted by 2006 and another 16 stations by 2013. No explanation has been given as to why setting up CNG dispensing stations would take so much time.

Some reports propose “immediate” implementation of certain measures. The action plan proposed for Ahmedabad points out that burning of dry leaves, garbage and tyres within the city should be stopped “immediately” and such ban should continue. Instead of using words like “immediate” or “as early as possible,” a plan should set a target date by which it can achieve total elimination of the practice. Again, the Ahmedabad report says that enforcement of surveillance of vehicles with higher black smoke is already in progress. In such case, the action plan should make clear what has been the impact of such surveillance and what remedial action has been taken. The plan should also propose a date by which it can eliminate the problem of heavily smoking vehicles on the road.

The plan for Faridabad points out that “transport department may arrange to introduce Deluxe buses on the 18 km stretch from Badarpur to Ballabgarh town on the highway for carrying local passengers” and “state run buses older than seven years be phased out.” However, it does not set a deadline for these activities.

Stringency of action plan

The Hon’ble Court has passed directions to the concerned states to develop action plans in view of extremely high levels of particulate pollution in the cities. Therefore the action plans drawn up should go beyond existing programmes and roadmaps to reduce pollution levels in a short timeframe. And that roadmap should be clearly defined to show how are they going beyond the minimum national provisions.

Implementation details of action points

It is not enough to point out that the proposed action is “to launch a drive to stop adulteration of fuel, particularly three-wheelers and commercial vehicles” (Ahmedabad). The goal is not to launch the drive, but to stop adulteration. Therefore details of how that is to be achieved effectively should be clearly laid down. Similarly, instead of saying that the action point is “to ensure that no loose kerosene is sold within the vicinity of petrol pumps,” the plan should spell out what are the various loop holes currently that make adulteration possible and such loopholes would be plugged through policy action and by which date. (How sale of solvents and kerosene will be regulated, pilferage stopped, penalty made meaningfully stringent, public broadcast of defaulting pumps etc).

Similarly, it is not enough to say that public transport is to be improved in a city. There should be a detailed plan with clear timeline and assigned responsibilities. The plan should be able to reflect the main purpose of strengthening public transport system, which is to bring in a modal shift, that is move people from private modes of transport to public modes in order to reduce congestion and pollution.

Equally important is to clearly outline any alternative fuel programme proposed. If any state proposes to move its vehicles to run on CNG or LPG, it should spell out clearly the number of each category of vehicles it proposes to run on that fuel within a firm timeline.

Inter-agency and Centre-State coordination

Moreover, the plans do not delineate the implementation aspects of the different measures proposed. There seems to be little coordination between the different agencies within the state governments. To avoid such a problem, a state government should appoint one nodal agency or officer who can be held accountable for implementation of the entire plan. Moreover, the preparation of plans also show a lack of coordination between different state agency and the state and central governments. In view of the fact that the Hon’ble Court had asked the state and central governments to work together to prepare the action plan such problem should not have existed. Therefore, taking note of the Hon’ble Court’s directions, the Authority recommends that the action plans submitted should not only clearly mention the timeframe for implementation of different measures on the part of the state governments, but they should reflect firm time bound commitment on part of the central government also. As all these cities have been selected for

advance action on the basis of their pollution levels they should aim to have more stringent norms and action strategies than the national norms.

For instance, the report for Faridabad says, that "*alternate fuels like LNG, LDO, HSD may be introduced in industries in a phased manner instead of rice husk, coal etc. presently being used. The oil companies should conduct a survey for checking viability to supply LNG to industry so that the industry should finally convert to LNG as fuel. Oil companies have informed that they can make LPG available.*" This does not make clear which fuel is going to be used for what kind of industrial unit. Moreover, in no way can LDO or HSD be classified as alternative fuels. To top it all, the report does not give any timeframe for replacing the polluting fuels being consumed. Instead, it mentions that two LPG stations are to be set up by the Union government and Indian Oil Corporation by 2004. Thus, the timeline has no relevance to the action point proposed.

In the next action point, the report says that ultra low sulphur diesel, to be made available by IOC, should be used by industry for generator sets. This comes more as a suggestion than an action point. It however does not make clear what it means by ultra low sulphur diesel, nor does it set any timeframe, though it assigns the responsibility to the Union government and IOC for implementation.

EPCA feels that concrete action points should be proposed instead of making unclear suggestions. The final reports should have clear timeline and clearly assigning responsibility. The Union government should also appoint a nodal authority, which can be held accountable for implementation of the action plans.

D. EPCA's observation

In view of the above EPCA would like to place before the Hon'ble Supreme Court that the concerned state agencies and governments be directed to modify and finalise their respective action plans as per the new guidelines given by EPCA without any delay.

ANNEXURE I

AFTER REVIEWING THE REPORTING FORMAT OF THE DIFFERENT STATE GOIVERNMENTS EPCA HAS GIVEN THE FOLLOWING GUIDELINES FOR REPORTING THE CURRENT STATUS OF POLLUTIION LEVELS AND DIFFERENT MITIGATION MEASURES ALREADY TAKEN ALONG WITH THE PROPOSED ACTION PLAN.

A BRIEF DESCRIPTION OF THE CITY CONCERNED

Describe the geographical location of the city (topographical features), population, and area of the city, available road space: trend over the last three decades till 2001

I. AIR QUALITY OF THE CITY

Please discuss the air quality of the city and present the following data:

1. Air quality data of a decade at all monitoring stations in the cities (both NAQM and non-NAQM stations) for at least four pollutants (SPM, PM10, sulphur dioxide, nitrogen dioxide) till December 2002. Data should be presented as monthly average and maximum including the number of days on which monitoring was done. Also include data of any special monitoring conducted in the city.

2. **Status of public health:**
    i. Any study on health impact of air pollution done in the city by any hospital, research organization or any other government agency.

    ii. Rate of hospitalization due to cardio-respiratory illness over the last five years

II. SOURCES OF AIR POLLUTION IN THE CITY

Please state if any emission inventorisation has been done for the city. Please give an estimate of the amount of pollutants contributed by the different segments and provide the details of each segment. Indicate the agency that has conducted such studies.

GIVE THE FOLLOWING DETAILS WITH REGARD TO THE DIFFERENT SOURCES OF POLLUTION IN THE CITY AND ALSO INDICATE THE CURENT STATUS OF POLICY MEASURES THAT HAVE ALREADY BEEN IMPLEMENTED TO CONTROL POLLUTION FROM THESE SOURCES:

A. VEHICLES

1. **Number of vehicles:** Registration figures of the following categories of vehicles for at least a decade (1993-2003)
    ii. Passenger cars
    iii. Two-wheelers
    iv. Three-wheelers
    v. Taxis
    vi. Goods vehicles, and
    vii. Buses

3. **Number of non-motorized vehicles:** Number of bicycles, cycle-rickshaws etc over at least the last one decade till 2002; also state if any restriction has been imposed on movements of non-motorized transport in the cities.

4. **Present status of vehicle emissions control programme underway**

    i. Schedule of implementation of emissions standards and fuel quality from 1991. Current fuel quality (diesel and petrol) and emission norms in force. If pre-mixed 2T oil is mandatory for two-stroke vehicles. Trend in diesel and petrol consumption in the transport sector.

ii. In-use vehicles: Status of PUC programme, current weaknesses and modifications planned to improve the system. Compliance rate (percentage of vehicles going for a check) and failure rate of vehicles under the programme for the last five years.

iii. Other strategies already planned and in force to control emissions from the in-use vehicles. (Regulation of vehicle age, incentive and disincentive to ensure fast fleet renewal, fuel improvement, higher taxes on older vehicles, hike in parking fees etc)

iv. Status of public transport in the city. Number of public transport buses in the city and estimate of the current travel demand met by the public transport. Any assessment/study of the traffic and transportation status, congestion etc conducted for the city.

v. If any alternative fuel is available for the transport sector in the city and the extent of use. (CNG/LPG, ethanol blend, electric etc). Feasibility of providing natural gas/LPG to these cities.

vi. A detailed report on measures taken by the state government and the oil companies to detect adulteration of automotive fuels in these cities. Clearly point out who collects samples, the magnitude of sample collection and where are the samples tested. What is the failure rate? The extent of adulteration found, and the type of adulterants used to be found.

vii. Different kind on taxes imposed on different categories of private and commercial vehicles (both new and on-road), fuels and use of vehicles like parking fee etc.

B INDUSTRY

Industrial pollution and control

1. Types of different air polluting industries present in the cities and their numbers. The report should give all details on the air polluting industrial units, how many of them are meeting emission norms or how many of these are fitted with air pollution control devices and what are these devices. It should also submit data on the source of emission (whether boiler or furnace or cupola etc) boiler capacity, type of fuel used, fuel consumed per day, number of working hours per day, and quantity of emissions of all pollutants (sulphur dioxide, nitrogen dioxide and suspended particulate matter).

C. POWER PLANTS

1. Number of power plants in the city, fuel consumption and control measures implemented: substantiate with emissions data

D. COMMERCIAL

1. Number of generator sets in use in the city. Give the break-up according to capacity of the generator sets and the type of fuel used and total consumption

2. Extent of biomass burning, if any effort made to control this – impact.

III. THE PROPOSED ACTION PLAN TO CONTROL PARTICULATE POLLUTION IN THE CITY

This section should indicate in a very structured way the policy measures that have already been implemented to control air pollution from different sources and the significant improvements that are being planned for future action.

Please present the action plan according to each segment – vehicles, industry, power plants, other sources, with assigned responsibilities for implementation and deadlines.

The action plan should not only be a list of actions proposed by different government agencies and departments, to be implemented at an ad hoc time frame, but should reflect a firm commitment and deadlines. The timeframe proposed should be based on the impact on pollution levels and public health and not only on feasibility of implementation as decided by the agencies/departments. In each case try to quantify as much as possible the benefits expected.

Please follow the detailed format for reporting the section on proposed action plan as mentioned below:

FORMAT FOR PREPARATION OF THE PROPOSED ACTION PLAN AND REPORTING PROGRESS

Sl.No.	Issue	Activities/ Headings	Implementing Agency	Target date	Status as on -------
1.	VEHICLUAR POLLUTION				
1.1	Improvement in vehicle technology	Introduction of Bharat-II vehicles Introduction of Bharat-III vehicles Introduction of Euro IV vehicles Introduction of emission warranty for vehicles Implementation of Bharat stage II norms for 2 and 3 Wheelers			
1.2	Adulteration of fuels	a. Setting up of facility for fuel testing b. Regulatory mechanism for fuel testing c. Inventory of solvent with their end use. d. Public broadcast of defaulting petrol			

		pump e. Stringent penalty f. Any other measure like electronic marker system etc			
1.3	Proportioning of 2T oil	a. Installation of premix oil dispensers for 2-strokel 2 and 3 Wheelers b. Measures to ban sale of loose 2 T oil			
1.4	Introduction of cleaner fuel(s) LPG/CNG	Indicate the priority vehicles segments like three wheelers, small commercial vehicles, buses etc that would be targeted for phased introduction of alternative fuels. Based on this plan estimate the demand for cleaner fuel Provide plan and schedule for setting up of infrastructure facility for dispensing and (compressing) of gas Number of stations planned Provide the institutional plan for specially designed inspection programme for safety measures for CNG and LPG vehicles - Regulatory mechanism - Authorisation of conversion workshop and Fitment of kits etc - Inspection and periodic checks			

		Conversion of existing vehicles to clean fuels Fiscal measures to encourage replacement of old vehicles with vehicles on gaseous fuels			
1.5	Phasing out of old vehicles	a. Phasing out of 15 year old commercial vehicle b. Phasing out of 8 year old buses c. Phasing out of 15 year old 3 Wheeler and diesel three wheelers d. Phasing out of Tempos			
1.6	Improvement in Fuel quality	a. Reduction sulphur content in diesel and petrol to 0.05% and lower levels immediately b. Reduction in benzene content to 1% in petrol c. Plan for introduction of Euro III and Euro IV fuels			
1.7	Centralised inspection & maintenance system	a. Provide the phase in plan of improved centralized inspection and maintenance system to replace the current PUC system. Prioritise the vehicle segments like commercial vehicles that would be first brought under the advanced system inspection system.			
2.0	Traffic management	a. Plan for augmentation of public transport system on clean fuels b. Removal of encroachment on roads			

		c. Formulation and implementation of parking policy d. Traffic signalling system e. Planning and construction of by-pass roads f. Penalties for traffic rule violations g. Restriction on plying of interstate/intercity buses in city h. Restriction of entry of non-destined commercial vehicles in city i. Formulation of transport policy to induce a modal shift from private to public modes of transport and implementation			
3.0	Industrial pollution control	a. Installation of adequate pollution control measures in industries b. Feasibility of alternate cleaner fuels and implementation. c. Monitoring programmer of industries			
4.0	Thermal power plants	a. Use of washed/beneficiated coal for coal based TPP b. Installation of bag filter with ESP c. Schemes for utilization of fly ash d. Identification of new sites for fly ash disposal			
5.0	Plantation	a. Tree plantation b. Green area development			

6.0	Strengthening of air quality monitoring network	a. Increase number of monitoring stations b. Monitoring of additional pollutants c. Installation of automatic monitoring stations			
7.0	Generator sets	a. Plan to control numbers b. Monitoring the use of cleaner fuels			
8.0	Biomass burning	Stop open burning of biomass			
9.0	Supervisory powers	Single nodal agency to supervise and monitor the implementation of the action plan			

ANNEXURE II

BRIEF COMMENTS ON THE INFORMATION PROVIDED BY THE STATE GOVERNMENTS ARE GIVEN BELOW:

HARYANA : Faridabad

Air quality data

Air quality data is provided as monthly and annual averages from 1998 to August 2003, in addition to some data on periodic air quality monitoring. The annual maximum levels for all monitored pollutants should be included. The HSPCB has started monitoring RSPM since September 15, 2003, daily data (24 h our average) for which should also be included in the final report.

The report mentions that air pollutants from Delhi move into Faridabad due to predominant northwest flow of wind. This should be substantiated by meteorological data.

INDUSTRIAL EMISSIO NS

There are 238 air-polluting industries, out of which 227 have installed air pollution control devices. According to the report, "all the concerned industries are running the air pollution control devices regularly and meeting the norms." Yet the air quality monitoring data near the source of emissions show very high levels.

The industrial emissions data (Annexure XI (i) and (ii)) submitted by the HSPCB however does not mention the timeframe of the data. The unit used for quantity of emissions is also no t clear (it is presented in cubic metre per second, should be presented according to weight). It is important to present the emissions data and compare it with the respective standards. The report should also specify the type of emission control devices be ing used in these industries.

POWER PLANT EMISSIONS

The report points out to two coal-based thermal power plants in Badarpur and Faridabad as major emitters. It however does not quantify the amount of fuel consumed at these power plants, the load factor of the plants and the emissions of different pollutants including generation of fly ash. The final report should include this information.

VEHICLE EMISSION

The report says that there are 90,000 vehicles registered in the Faridabad and about 50,000 vehicles pass through the town every day. The final report should give a category -wise (and fuel -wise) break -up (see guideline) of both registered and floating vehicles. The report should also present the diesel and petrol consumption data for the city for at least the last five years.

Generator sets do not even get a mention. The report should submit data on the number of gensets used, according to capacity and fuel consumed and the amount of fuel consumption.

TAMIL NADU: Chennai

Air quality data

The report presents air quality data for 2001-02 and 2002-03 for four pollutants at eight stations. It is not clear whether these are annual averages. The air quality data should be presented as annual average and maximum (besides monthly average and maximum), along with the number of days monitored at each station during the last decade.

Industrial pollution

The report mentions only about incinerators installed by 70 hospitals, which are to be completely banned by December 2003. However, it does not mention anything about other industrial units within the city. The final report should give all details on the air polluting industrial units, how many of them are meeting emission norms or how many of these are fitted with air pollution control devices.

It should also submit data on the source of emission (whether boiler or furnace or cupola etc) boiler capacity, type of fuel used, fuel consumed per day, number of working hours per day, and quantity of emissions of all pollutants (sulphur dioxide, nitrogen dioxide and suspended particulate matter).

Power plant emissions

Going by the report, there is no power plant in the city.

Vehicular emissions

The report presents data on total registered vehicles in the district from 1997 to 2003. It doesn't give any information on the number of registered vehicles in the city according to different categories (and sub-category of type of fuel consumed).

KARNATAKA : Bangalore

Air quality data

The report has submitted information on air quality data as monthly averages at three stations from 1993 to 1992, besides daily data generated by mobile monitoring labs. Annual average and annual maximum levels for each monitoring station is required.

Industrial pollution

There are a total of 1,552 industrial units in Bangalore, out of which 284 are air polluting. The report does not mention how many of these are meeting emission norms or how many of these are fitted with air pollution control devices. The final report should submit data on the source of emission (whether boiler or furna ce or cupola etc) boiler capacity, type of fuel used, fuel consumed per day, number of working hours per day, and quantity of emissions of all pollutants (sulphur dioxide, nitrogen dioxide and suspended particulate matter).

Power plant emissions

No power plant.

Vehicular emissions

The report provides detailed registration data of different categories of vehicles. However, there is a need to provide an estimate of the number of these vehicles according to fuel -type too.

In a separate report submitted to EPCA by the chief secretary of the state, data regarding PUC inspections are given from 2001 to 2003. This data needs a clearer presentation in the form of different categories of vehicles and model years for both inspection and failure.

UTTAR PRADESH : Kanpur and Lucknow

Air quality data

The air quality data for both Kanpur and Lucknow is presented as annual averages of four pollutants at different stations. Pollutant -wise air quality data should be presented in a tabular format, mentioning not only t he annual average, but also the annual maximum levels and monthly averages for each year, for each monitoring station, along with the number of days on which monitoring was done.

Industrial pollution

While the report on Kanpur lists the industrial units in the city, without mentioning which are the air polluting ones, the report on Lucknow just mentions the type of air polluting industrial units in the city. Both reports should enlist all air -polluting industries and mention how many of them are meeting e mission norms or how many of these are fitted with air pollution control devices. The reports should also submit data on the source of emission (whether boiler or furnace or cupola etc) boiler capacity, type of fuel used, fuel consumed per day, number of w orking hours per day, and quantity of emissions of all pollutants (sulphur dioxide, nitrogen dioxide and suspended particulate matter).

Power plant emissions

No information provided

Vehicular emissions

While vehicle registration data for Lucknow is presented for one year only, for Kanpur the data has been presented for four years only. The final reports should give a category -wise (and fuel -wise) break -up (see guideline) of both registered and floating vehicles. The report should also present the diesel and petrol consumption data for the city for at least the last five years.

ANDHRA PRADESH: Hyderabad

Air quality data

Only PM10 (RSPM) levels have been presented as annual average for different stations. Information on all pollutants should be given as annual average and maximum at each monitoring station, along with the number of days monitored.

No other information provided

GUJARAT: Ahmedabad

Air quality data

The report presents air quality data in the form of annual averages from 1991 to 2001 (for sulphur dioxide, nitrogen dioxide and suspended particulate matter) and from 1999 to 2002 for PM10. It is recommended that the air quality data be presented for each site separately in tabular format, giving the annual average and maximum and the numbe r of days monitored in the year.

Industrial pollution

The report mentions that there are 490 air polluting industrial units, but gives no further details. It does not mention how many of these are meeting emission norms or how many of these are fitted with air pollution control devices. The final report should submit data on the source of emission (whether boiler or furnace or cupola etc) boiler capacity, type of fuel used, fuel consumed per day, number of working hours per day, and quantity of emissions of all pollutants (sulphur dioxide, nitrogen dioxide and suspended particulate matter).

Power plant emissions

No information on power plants.

Vehicular emissions

The report only presents the percentage composition of the vehicle fleet according to vehicle category. There is no information on registration of vehicles, PUC inspection and failure rate and break-up of vehicle categories according to fuel used. This information should be included in the final report.