

**Review of the Environmental Impact Assessment Report
Prepared for the Proposed Modernization of Existing Unit #6
by Change of Fuel at Trombay Thermal Power Station by
Tata Power Company Limited**



Sponsor



Tata Power Company Limited



National Environmental Engineering Research Institute (NEERI)

July, 2013

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1. Introduction

Chembur area situated in the eastern end of the city of Mumbai was once highly polluted zone. It was attributed to the presence of many large scale industries. With sustained efforts of last couple of decades the air quality has shown improvement and also has not substantially deteriorated despite increased vehicular activity and also in some cases expansion of industries. The Mahul area of Trombay has Tata Power, BPCL and HPCL as three major industries. However, in the entire eastern Mumbai region, some other mega industries are also located.

This region of Mumbai is densely populated with high vehicle density, many of which ply to and from Mumbai, while crossing the region. The presence of large industries such as refineries, RCF still makes population believe that the levels are mainly due to industries and some cases vehicles. In the recent study carried out by CPCB/MoEF has also brought out the fact that the pollution sources of eastern region of Chembur (Mahul) have declined from those few decades back. The sources are complex as besides industries, air polluting sources within 10 km radius are construction, garbage burning, biomedical incineration, vehicles, road dust and distributed biomass burning.

The Trombay Thermal Power Station (TTPS) of M/s. Tata Power Company Limited is operational since 1956 with installed capacity of 1580 MW having four operational units viz. Unit 5, Unit 6, Unit 7 and Unit 8. Unit 4 is kept as standby unit. These units are operated on Coal, Oil & Gas as fuel. Unit 6 which was commissioned in 1990 is presently using LSHS/LSWR and gas as and when available. Due to increase in the cost of imported LSHS/LSWR and unavailability of Natural Gas, generation cost of Unit 6 has become uneconomical. To provide affordable power to Mumbai Customers, Tata Power has proposed modernization of existing Unit 6 by change of fuel from LSHS/LSWR to Low Sulphur Imported Coal.

As a part of Environment Clearance Process, Tata Power applied to MoEF and MoEF granted ToR for the preparation of EIA report for the said project on 25th January 2012 and additional ToR post site visit of the expert appraisal committee on 24th August 2012. Subsequently, Tata Power prepared Environment Assessment Report through accredited consultant M/s. Tata

Consulting Engineers Ltd. (TCE). The same was submitted for the conduct of public hearing which was organised on 15th January 2013. During the public hearing one of the concerns raised was that M/s. TCE being a Tata Group company, the report can be biased in favour of Tata Power. In order to allay such public perceptions, Tata Power felt that an examination and review of the EIA report prepared by Tata Power through an independent agency like National Environment Engineering Research Institute (NEERI) will be most appropriate. This report has been prepared to address the concern as stated above as also bring out any deficiencies or additional points which may be useful to share with stakeholders concerned.

2. Objectives

Review the Environmental Impact Assessment report and provide inputs on possible areas of concern expressed in public consultation.

3. Scope of Work

- Visit and carry out consultation with concerned persons at Tata Power with regard to the project
- Review of the EIA report submitted for Public Hearing to ascertain its completeness as per the guidelines given in the EIA Notification 2006 and also any comments given therein
- Check all the computations and assumptions made if any and their implications on the overall outcome.
- Address the issue of air pollution estimates and prediction, especially the PM, NO_x and SO₂ and to review the methodologies used for predictions of ground level concentrations of pollutants
- Review the study carried out by CMFRI on the marine eco-system
- Undertake some validating field data collection as per needs.
- Give a report on the above as a review of the study and any other concern raised in public hearing along with any suitable suggestions.

4. Purpose of the Review of the Report

Tata power has been operating for a long time at the same place. In its current proposal, wherein it has proposed to change fuel from LSHS/LSWR to imported coal, it is felt that the pollution levels are likely to increase. This is mainly due to the perception that coal is more polluting than

LSHS/ LSWR. The report prepared by TCE has been presented at MoEF with its first TOR issued on 25th January, 2012 and additional TOR on 24th August, 2012 after the expert committee visit. The report has been also subjected to public hearing and the issues raised have been responded. The minutes of the meeting of the MoEF dated 15.1.2013 is given in **Annexure I**.

The EIA report prepared by TCE as per the generic structure as given in the EIA notification 2006 on behalf of TTPS has addressed all the environmental concerns. **Table 1** summarizes the areas of EIA report which were studied based on the TOR provided by MoEF.

The baseline assessment of environment, prediction of impact before and after the proposed modernization, evaluation of impacts leading to environment management plan and other requirements in the EIA study have been examined. The purpose of this report is to address any aspects which may show more detailed explanation on environmental impact of the proposed activity. Though, the overall assessment examined the whole EIA study, however, the sensitivity towards air pollution has been especially considered as Chembur area is considered more polluted in terms of air pollution. The general profile of air pollution of various locations within Mumbai which was monitored during Source Apportionment Studies carried out for Central Pollution Control Board study is given in **Table 2 and Figure 1**. From **Table 2** we observe that in 2007, Dharavi and Khar had more air pollution compared to Mahul which is located very close to Chembur.

Table 1 : Environmental Attributes and Frequency of Monitoring for Summer Season (March 2012 to May 2012)

Sr. No.	Environmental Component	Sampling Locations	Sampling Parameters	Total Sampling Period	Sampling Frequency	Methodology
1	Meteorology	One central location TTPS	Temperature, Wind Speed, Wind Direction	1 Season (March to May)	Hourly	The meteorology parameters were recorded using automatic micro-meteorological equipment consisting of anemometer, wind wane and thermometer. Review of secondary data collected from IMD Colaba for the last 30 years.
			Rainfall	1 Season (March to May)	Daily	Rainfall was recorded every day using Rain Gauge.
			Relative Humidity Solar Insulation	1 Season (March to May)	Hourly	Humidity was recorded using wet and dry thermometer and Psychometric charts.
2	Ambient Air Quality	7 Locations within the study area	SPM, PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , O ₃ , Hg	Twice a week for (March to May) months at each location	Continues 24 hrs	Gravimetric method for SPM, PM _{2.5} and PM ₁₀ . Modified West and Gaeke method for SO ₂ (IS-5182 part-II 1969) using Tetrachloro Mercurate 0.01 N absorbing solution. Modified Jacob-Hochheiser method (IS-5182 part-IV 1975) for NO _x using Sodium Arsenate 0.01N absorbing solution. APHA Method used for Hg.
3	Water Quality	6 Locations (2 surface water; 4 ground water)	As per IS: 10500-1991	March to May	Once during study period	Grab sampling analysis as per APHA methods. The parameters were analyzed in MoEF approved and NABL certified laboratory.
			Heavy Metals (Pb, Cd, Zn, Cr, Cu, Fe)	March to May	Once during study period.	

Table 1 (Contd..) : ...

Sr. No.	Environmental Component	Sampling Locations	Sampling Parameters	Total Sampling Period	Sampling Frequency	Methodology
4	Noise	6 Locations	Leq as per Noise Rule 2005	March to May	Once during study period	24 hours equivalent using Noise level meter (make-Bruel & Kjar, model-2221, Made in Denmark, Digital type)
5	Soil	5 Locations	Soil profile, Chemical Constituents,	March to May	Once during study period.	Analysis was carried out as per standard methods.
6	Terrestrial Ecology	Total study area	Flora and Fauna	March – May	Once in study period	Field observations taken through field visits and collected secondary data. Least count and quadrat method.
7	Demography and Socio-economic aspects.	Total study area	Demographic profile	March – May	One Field Visit	Published data for Census 2001 (CD from Census dept) and partly published data for 2011 census.
8	Land use	Total study area	Trend of land use change for different categories	--	Once	Global Positioning system and using satellite imageries.
11	Marine Ecology	Barge movement channel in Thane Creek	Water quality, Sediment quality, Biological aspects (plankton & benthos), Mangroves, if any, Fishing & breeding grounds, Fishery catch & resources, Marine ecology-nesting and breeding grounds of turtles and other marine organisms etc.	Study period	Once in a month during study period	The marine ecology study was conducted by an institute of repute, Central Marine Fisheries Research Institute (CMFRI).

Table 2: Air Quality Status of Seven Sites of Mumbai in 2007 and 2008

Pollutants	SPM ($\mu\text{g}/\text{m}^3$)	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NOX ($\mu\text{g}/\text{m}^3$)	O ₃ (ppb)	No. of samples
Colaba Summer	159.0	91.0	29.0	5.0	18.0	-	30
Colaba Post monsoon	204.6	140.7	59.7	12.7	37.7	31.4	29
Colaba Winter	246.2	183.7	92.3	15.4	53.0	21.9	28
Colaba Avg	203.3	138.5	60.3	11.0	36.2	26.7	
Dadar Summer	335.0	116.0	37.0	6.0	31.0	-	30
Dadar Post monsoon	350.7	212.4	111.7	15.0	63.0	14.4	30
Dadar Winter	291.5	253.3	106.0	15.8	98.7	12.8	29
Dadar Avg	325.7	193.9	84.9	12.3	64.2	13.6	
Dharavi Summer	400.8	176.9	74.0	6.0	39.0	-	28
Dharavi Post monsoon	501.2	244.8	91.3	15.8	53.1	32.5	29
Dharavi Winter	551.7	272.5	92.0	12.5	69.6	21.5	30
Dharavi Avg	484.6	231.4	85.8	11.4	53.9	27.0	
Khar Summer	145.6	62.0	15.0	5.0	14.0	-	30
Khar Post monsoon	399.6	228.8	83.0	11.4	66.3	11.3	30
Khar Winter	494.7	263.1	102.0	11.7	74.8	9.5	29
Khar Avg	346.6	184.6	66.7	9.4	51.7	10.4	
Andheri Summer	255.0	84.0	28.0	8.0	17.0	-	30
Andheri Post monsoon	398.6	223.4	98.7	13.5	78.9	-	30
Andheri Winter	396.5	236.8	121.0	11.2	78.7	10.1	29
Andheri Avg	350.0	181.4	82.6	10.9	58.2	10.1	
Mahul Summer	239.0	98.0	17.0	7.0	20.0	-	30
Mahul Post monsoon	388.4	218.7	87.0	14.8	53.5	22.6	30
Mahul Winter	395.0	270.9	127.1	18.4	72.0	12.8	28
Mahul Avg	340.8	195.8	77.0	13.4	48.5	17.7	
Mulund Summer Sum	352.0	163.0	62.0	5.0	51.0	-	30
Mulund Post monsoon	391.5	234.3	189.5	16.8	53.2	15.6	30
Mulund Winter	463.0	279.5	130.7	14.6	71.0	21.9	29
Mulund Avg	402.2	225.6	127.4	12.1	58.4	18.8	

Source : Source Apportionment Studies, Mumbai – CPCB -2009
(http://cpcb.nic.in/Source_Apportionment_Studies.php)

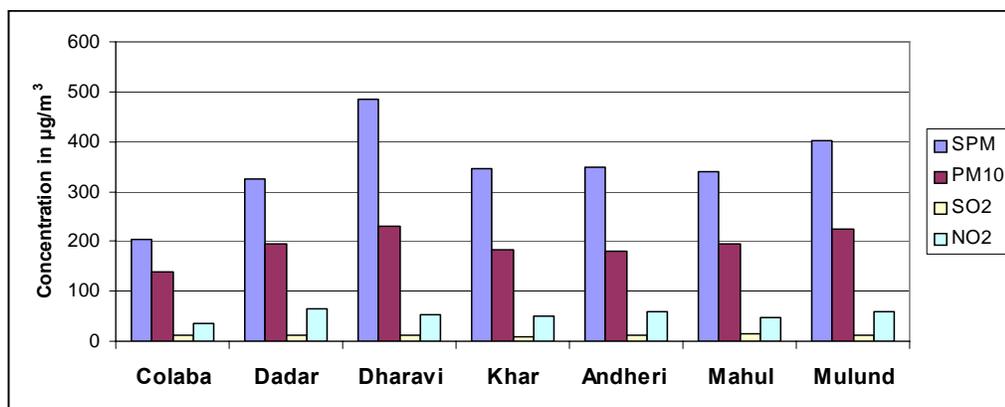


Figure 1: Air quality Status of Seven sites of Mumbai during 2007 and 2008.

5. Need for Assessment of the Proposed Project

For last few years the demand for power in Mumbai and Mumbai Metropolitan region has been growing rapidly. The peak power demand of Mumbai in the year 2011 was 3391 MW, which is likely to increase to 4000 MW by the year 2014-15. At full capacity, total generation in Mumbai is about 2277 MW resulting in a gap of about 1114 MW during Financial Year (FY) 2011-12 with all generating units operational. It is estimated that this gap would widen to more than 1700 MW by FY 2014-15, in case where no generation is added to the Mumbai region.

As discussed above, the need of sustained power supply and issue of power availability to Mumbai 24X7, the commercial capital, there is need to reassess the power generation processes and also the costs associated with the same. The increase in the cost of LSHS/ LSWR, the main fuel of Unit #6, TTPS is finding generation from this unit becoming expensive which may become unaffordable to the consumers. Keeping in view the need for sustained, uninterrupted as also affordable power supply for Mumbai, Tata Power proposed modernization of existing Unit #6 by change of fuel to use low sulphur imported coal (sourced from outside India) in place of LSHS/ LSWR.

Unit #6 (500 MW) is currently operated at lower capacity only with LSHS/ LSWR and sporadically on gas as and when available. Due to paucity of desired quality (low sulphur) LSHS/ LSWR locally which should be able to meet the norms of the environment, it needs to be imported at very high cost resulting in uneconomical generation cost of power from Unit #6. Also, Natural gas is not available in sufficient quantity and is unlikely to be available in near future also. TTPS had carried out the techno-economic assessment of gap between demand and supply of power, planned that the existing Unit #6 should be operated at full capacity with low sulphur imported coal. The proposed change in fuel for the Unit # 6 with coal firing was felt extremely necessary to meet the demand of power at reasonable cost to consumers in Mumbai region.

5.1 Project Description

The presently operating plant of Unit #6 is proposed to be converted to low sulphur coal as fuel. There will not be any change in the production process after proposed modernization as the only change will be imported coal in place of existing fuel LSHS/ LSWR. The generation capacity of the unit after the proposed modernization of Unit #6 will be same as it will continue to generate 500 MW.

It is estimated that with the use of imported coal, TTPS shall remain within existing limits of emission and additional ash generated shall be utilized by extending current facilities. Considering Gross Calorific Value (GCV) of 5000 Kcal/ kg of fuel coal, the coal requirement for Unit #6 is expected to be 6000 TPD. Annual requirement is estimated to be 2.0 Million MT.

Presently Unit #6 requires 66,000 m³/hr of sea water for condenser cooling which is taken from the Thane Creek. It has been estimated that there will not be any change in the water requirement. The water balance diagram is attached as **Annexure II** for further details.

To address the issue of additional coal handling, it is important to note that TTPS has its own captive coal berth facility for handling and unloading of coal for other units at Trombay. The captive coal berth has installed unloading capacity of 2.4 million Metric Tonne (MT) per year, which is proposed to be suitably augmented with additional equipment to unload coal for Unit #6. This will increase the coal unloading and handling capacity of the Captive Coal Berth from 2.4 Million MT/ year to 4.4 Million MT/ year. Additional coal storage facility will be created next to the coal berth for storing coal up to 2 Lakh MT. The facility will be supported with the mechanized coal handling system to handle coal in an environment friendly manner. The existing coal berth will be optimally utilized with additional equipment without increase in the length of berth.

To avoid any coal particles getting entrained in air, two coal conveyors are proposed from the captive coal berth to the Unit #6 for feeding the coal from the West side of the power Plant. The coal conveyor will be partially of belt type and partially pipe type with the proper covering arrangement to avoid dust emission. All existing system of captive coal berth will be utilized during the proposed modernization and there is no anticipation of any additional construction except installation of equipments for coal unloading such as additional coal unloader for enhancing coal unloading capacity, stacker reclaimer and conveying system. Since the existing plant shall be used with current lay out with minimal disturbance through optimum use of facilities, additional land requirement is not envisaged.

Total Ash generation from TTPS would be around 530 MT/day, however, ash generation from proposed modernization of Unit #6 will be 270 MT/ day taking the ash content in the coal of about 4.5% to 5.5%. The total Fly Ash generation from Unit #6 will be about 216 MT/ day whereas bottom ash generation will be about 54 MT/ day. Fly ash will be utilized in Ready Mix

Concrete in nearby Mumbai area. Bottom ash will be stored in hydro bins and same will be utilized in brick making.

5.2 Baseline of Existing Environment Settings

In the study region there are many places which may be impacted by the nearest sources. Since chimney heights of industries, especially of TTPS, are very high, the atmospheric dispersion is highly conducive for reducing air pollution. Similarly, the availability of vast marine water body not only provides ample water for cooling but also allows sufficient assimilative capacity for heat to get dissipated. Primary baseline environmental monitoring studies were conducted during summer season (March 2012 to May 2012) as summarized below:

5.2.1 Meteorological Data Generated at Site

The meteorological parameters were recorded on hourly basis during the study period at plant site. The parameters like wind speed, wind direction, temperature, relative humidity, rainfall and cloud cover were monitored.

The summary of meteorological data generated at site enlisted in below **Table 3**.

Table 3: Meteorological Detail of the Project Site

Sr. No.	Parameters	Min. Value	Max. Value	Avg. Value
1	Wind speed (m/s)	0.3	14.6	2.3
2	Temperature (°C)	21.4	39.4	26.9
3	Humidity (%)	19.5	86	54.7
4	Rainfall (mm)	Nil	Nil	Nil

5.2.2 Air Quality

The study area represents mostly urban and developed environment. Seven ambient air quality monitoring stations were selected in and around project site within 10 km radius of the study area. The parameters like Suspended Particulate Matter (SPM), Particulate Matter<10 μ (PM₁₀), Particulate Matter < 2.5 μ (PM_{2.5}), Sulphur –di-oxide (SO₂), Nitrogen Oxide (NO_x) & Ozone (O₃) were monitored during Summer season of 2012. Ambient air quality of these locations were compared with National Ambient Air Quality Standards (**Annexure III**). Summary of the results are given below.

- **SPM:** Out of the seven sampling locations the minimum concentration of SPM was observed as $199 \mu\text{g}/\text{m}^3$ recorded at Ulva and Nhava Villages and the maximum concentration observed as $392 \mu\text{g}/\text{m}^3$ recorded at Sewri Fort during the study period. The NAAQ standards of 2009 do not specify any standard for SPM.
- **PM₁₀:** Out of the seven sampling locations the minimum concentration for PM₁₀ was observed as $75 \mu\text{g}/\text{m}^3$ recorded at TTPS and with the maximum concentration observed as $212 \mu\text{g}/\text{m}^3$ recorded at Uran Village during study period. Observed values are beyond the NAAQ standards of $100 \mu\text{g}/\text{m}^3$ for Industrial/ Residential/ Rural areas for most of the locations due to rapid growth in construction activity in the metropolitan city. Values at TTPS site are within the NAAQ standard.
- **PM_{2.5} :** Out of the seven sampling locations the minimum concentration of PM_{2.5} was observed as $29 \mu\text{g}/\text{m}^3$ recorded at Nhava Village and the maximum concentration observed as $78 \mu\text{g}/\text{m}^3$ recorded at Sewri Fort during the study period. Observed values are well within the NAAQ specified standards of $60 \mu\text{g}/\text{m}^3$ for Industrial/ Residential/ Rural areas for most of the locations except Wadala Truck Terminus and Sewri Fort due to construction activity of monorail and eastern free way. Values at TTPS site are within the NAAQ standards.
- **SO₂:** Out of the seven sampling locations the minimum concentration for Sulphur dioxide (SO₂) was observed as $12.5 \mu\text{g}/\text{m}^3$ recorded at Nhava Village and the maximum concentration observed as $35 \mu\text{g}/\text{m}^3$ recorded at Wadala Truck Terminus during the study period. Observed values are well within the NAAQ standards of $80 \mu\text{g}/\text{m}^3$ for Industrial/ Residential/ Rural areas.
- **NO_x :** Out of the seven air quality locations the minimum concentration observed as $22 \mu\text{g}/\text{m}^3$ recorded at Nhava Village and the maximum concentration for Oxides of Nitrogen (NO_x) was observed as $40 \mu\text{g}/\text{m}^3$ recorded at Wadala Truck Terminus during the study period. Observed values are well within the NAAQ specified standards of $80 \mu\text{g}/\text{m}^3$ Industrial/ Residential/ Rural areas.
- **Ozone :** Out of the seven sampling locations the minimum observed concentration of ozone was $41.7 \mu\text{g}/\text{m}^3$ recorded at Maravali Church and the maximum concentration for Ozone (O₃) was observed as $73.9 \mu\text{g}/\text{m}^3$ recorded at Sewri Fort during the study period. The O₃ concentrations in the region are observed to be well under the limits of $100 \mu\text{g}/\text{m}^3$ as specified by NAAQ standards.
- **Hg :** Heavy metal mercury was not detected during the entire study period in the study area at all the locations.

5.2.3 Water Quality

Water samples were collected from eight locations (4 Surface Water and 4 ground water). These samples were taken as grab samples and analyzed for various parameters to compare with the standards.

The water samples for fresh water (included surface and ground water) were assessed in terms of IS 10500. It was found that ground water has higher TDS due to sea water intrusion in many places. Surface water at most places were contaminated from faecal matter, however, the toxic metals contamination was ruled out.

pH: pH level of samples are within the stipulated range as per drinking water standards IS10500 for SW 1.

The comparative study of the sea water samples including samples near intake and outfall points of TTPS revealed that the contamination has not been prevalent for a given marine water standards.

5.2.4 Soil Environment

The project site and its vicinity is highly built and industrialized and there are limited places where any agricultural activities are prevalent. The study region has many areas where green vegetation can be seen indicating that for trees and shrubs, the soil quality is good.

5.2.5 Noise Level Survey

The noise monitoring has been conducted for determination of noise levels at six locations in the study area. Noise monitoring results reveal that the ambient noise levels at all locations are well within the limits as per Ambient Noise standards.

5.2.6 Ecology of Study Area

Vegetation cover is seen on BARC hills and Elephanta Island. Mangrove patches are seen on the coastal region of Elephanta Island, Thane creek, Mahul creek & Mahim creek. No Sanctuary, National Park, Reserved Forest exist within the study area of 10 KM from TTPS except recently declared Mangrove forest. Detail flora and fauna study was conducted, especially for Marine Ecology through Central Marine Fisheries Research Institute, Mumbai.

5.2.7 Socioeconomic Status

TTPS falls in M ward (West) as per MCGM record. The area is well developed due to the various industries like refineries of Hindustan Petroleum Corporation Limited (HPCL) and Bharat Petroleum Corporation Limited (BPCL), RCF etc. and vital installations like BARC and Naval Communication Centre. The area is well connected with road network and has all the amenities like drinking water, schools, health care centers, bus services, police station, post office etc.

The project site touches the most densely populated metro conglomerate of Mumbai. The 10kms radial distance comprises of area like Kurla, Sion, Chembur, Maravali Church, Wadala Truck Terminus, Sewri Fort etc.

The urban air quality concerns are majorly considered important in Chembur, Sion, Wadala truck terminal areas.

6.0 Air Quality

Prediction of impacts on air environment has been carried out by Tata Consulting Engineers using (ISCST3) Model to find out the maximum ground level concentration of SO₂, NO₂ and PM. Two scenarios were considered (1) representing the existing operation, (2) representing the operation after proposed modernization. TCE considered modeling for summer season.

NEERI carried out the modeling using EPA regulatory model AERMOD (Cimorelli, 2005) which is a state-of-the-art dispersion model. Though ISCST3 model is acceptable an attempt has been made to use AERMOD to compare the results. Air quality modeling was carried out by NEERI for both summer and winter seasons to predict spatial distribution of PM, NO₂ and SO₂ concentrations in ambient air.

6.1 Model Description

The AERMOD model is applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including, point, area and volume sources). AERMOD is a steady-state plume model.

In the stable boundary layer (SBL), it assumes the concentration distribution to be Gaussian in both the vertical and horizontal. In the convective boundary layer (CBL), the horizontal

distribution is also assumed to be Gaussian, but the vertical distribution is described with a bi-Gaussian probability density function. The convective boundary layer, or dry adiabatic layer is the lower tropospheric layer in contact with the ground heated by the sun and swept by the wind. The convective phenomena and wind causes significant air mixing with horizontal and vertical turbulences. Additionally, in the CBL, AERMOD treats “plume lofting,” whereby a portion of plume mass, released from a buoyant source, rises to and remains near the top of the boundary layer before becoming mixed into the CBL. AERMOD also tracks any plume mass that penetrates into the elevated stable layer, and then allows it to re-enter the boundary layer when and if appropriate.

Recently USEPA has developed the meteorological preprocessor IMD-AERMET which uses routine data from the IMD to estimate the meteorological inputs required to apply AERMOD. IMD AERMET requires only a single surface measurement of wind speed wind direction and ambient temperature. Like ISCST3, AERMOD also needs observed cloud cover. Surface characteristics in the form of albedo, surface roughness and Bowen ratio, plus standard meteorological observations (wind speed, wind direction, temperature, and cloud cover), are input to AERMET. AERMET then calculates the PBL parameters: friction velocity, Monin-Obukhov length, convective velocity scale, temperature scale, mixing height, and surface heat flux (H). These parameters are then passed to the INTERFACE (which is within AERMOD) where similarity expressions (in conjunction with measurements) are used to calculate vertical profiles of wind speed (u), lateral and vertical turbulent fluctuations, potential temperature gradient (d^2/dz), and potential temperature.

Pollution dispersion calculation was done for PM, SO₂, and NO₂ emission for existing as well as future conditions, taking the Unit #6 modernization into account. The area has been divided into 500 m grid and the ground level concentration of the pollutant at each grid point was calculated. Total area for calculation of GLC's has been considered as 15km X 15km.

6.2 Inventory

Two scenarios were developed by Tata consulting Engineers for the modeling, Scenario 1 reflecting the existing mode of operation, with Units #5, #8 firing on coal, Unit #6 firing on oil, and Unit #7 on Natural Gas.

Scenario 2 is the future case, Units #5, #6 and #8 firing on coal and Unit #7 on natural gas. Stack details after proposed modernization are given in **Table 4**. Emission rates of pollutants from the two scenarios are contained in **Tables 5 and 6** and emission rates for scenarios 1 and 2 are given in **Tables 7 and 8**.

Table 4: Stack Details after Proposed Modernization at TTPS

Sr. No.	Particular	Stack Height in meter	Stack Diameter in meter	Flue gas exit velocity m/s	Exit Flue gas temp °K
1	Unit #5	152.4	7.32	25	413
2	Unit #6	275.0	7.32	25	413
3	Unit #7	60.0	6.5	19	383
4	Unit #8	220.0	5.4	25	413

Table 5: Pollutant Emission Rates for Scenario 1 – Current Operations

Details		Unit #5	Unit #6	Unit #7	Unit #8	Total
Capacity	MW	500	500	180	250	
Fuel		Coal	Oil	Natural Gas	Coal	
Sulphur	%	0.2	0.17	-	0.2	
FGD efficiency	%	90	-	-	90	
Fuel consumption	TPD	6000	2800	700	3000	
SO ₂ emission	TPD	24	10	-	12	
SO ₂ emission After FGD	TPD	9.5	9.5	-	4.8	24 TPD

Table 6: Pollutant Emission Rates for Scenario 2 – After Unit #6 Modernization

Details		Unit #5	Unit #6	Unit #7	Unit #8	Total
Capacity	MW	500	500	180	250	
Fuel		Coal	Coal	Natural Gas	Coal	
Sulphur	%	0.28	0.28	-	0.28	
FGD efficiency	%	90	90	-	90	
Fuel consumption	TPD	6000	6000	700	3000	
SO ₂ emission	TPD	34	34	-	17	
SO ₂ emission After FGD	TPD	13.3	3.4	-	6.7	24 TPD

Table 7: Existing Emission Rate (g/s)

Parameters	Unit #5	Unit #6	Unit #7	Unit #8
SO ₂ emission	110	110	-	55
NO ₂ emission	129	99	19	64
PM emission	70	49	-	38

Table 8 : After Unit #6 Modernization Emission Rate (g/s)

Parameters	Unit #5	Unit #6	Unit #7	Unit #8
SO ₂ emission	154	39	-	77
NOx emission	129	97	19	64
PM emission	70	29	-	38

6.3 Modeling Results

a) Summer Season

Wind rose: Meteorological conditions play a vital role in transport and dispersion of pollutants in the atmosphere. The hourly surface meteorological data viz. wind speed and direction and surface temperature required as input to the model was taken from IMD data. The wind rose for the period 1st March to 31st May 2012 is given in **Figure 2**. The prominent directions during March, April and May are from northwest (NW), west (W) and west-north-west (WNW) directions with a calm percentage of 21.3%.

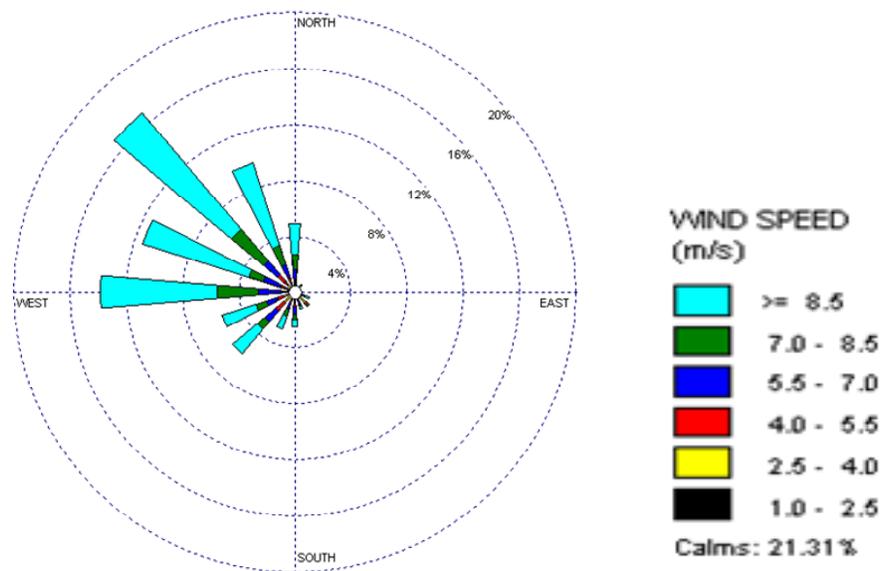


Figure 2: Wind rose for summer season with IMD data

i) TSP Concentration: The maximum value in summer of average concentrations of TSP for the study area of size 15km x 15 km for whole period 1st March to 31st May 2012 is 1.54 and 1.36 $\mu\text{g}/\text{m}^3$ at (2000m, -2500m) under scenario 1 and 2 respectively. Contours of average concentrations of TSP for the whole period under scenarios 1 and 2 are shown in **Figures 3 & 4**. Under scenario 1, the emissions from Stacks 5, 6 and 8 are 70, 49 and 38 g/s respectively whereas the emissions are reduced to 70, 29, and 38 g/s respectively under scenario 2 and hence a reduction in highest concentration.

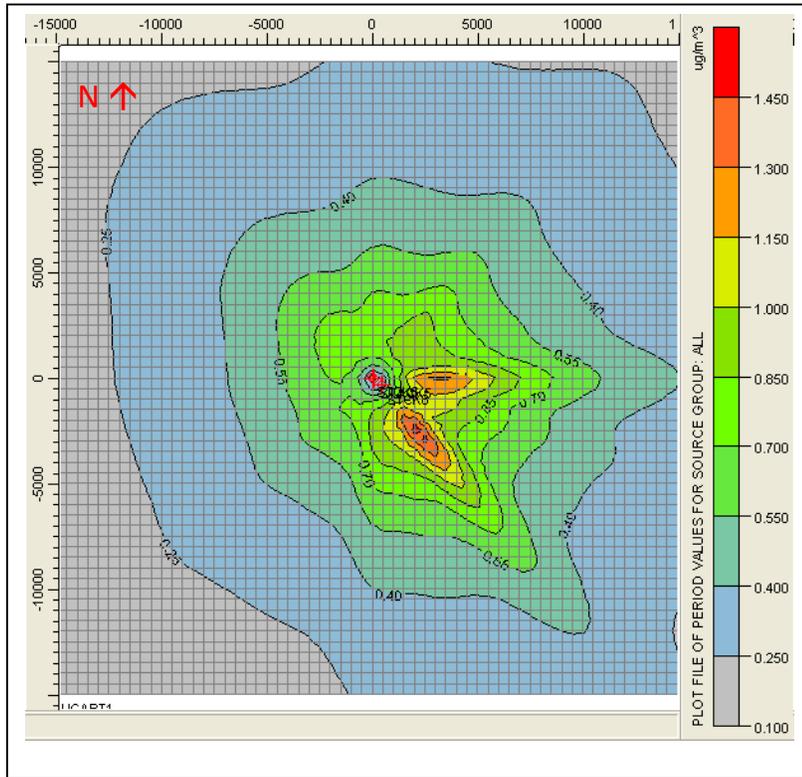


Figure 3: Contours of Average Concentrations of PM in summer: Scenario 1

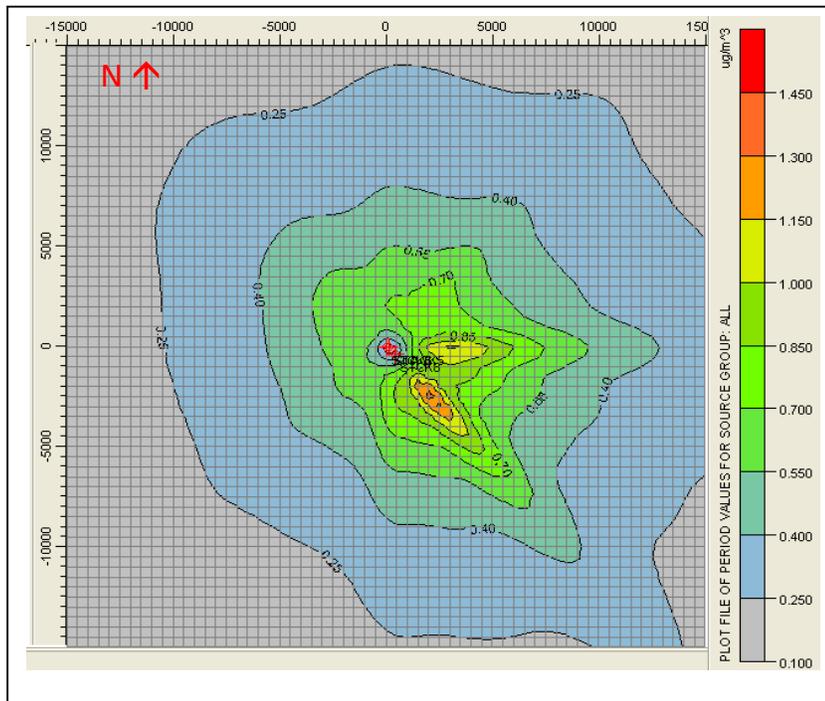


Figure 4: Contours of Average Concentrations of PM in summer: Scenario 2

ii) **NO₂ Concentrations:** Contours of average concentrations of NO₂ for the period 1st March to 31st May 2012 under scenarios 1 and 2 are shown in **Figures 5 & 6**. The maximum value of average concentrations of NO₂ in winter for the study area of size 15km x 15 km for the whole period are 3.17 and 3.06 µg/m³ at (2000,-2500) under scenarios 1 and 2 respectively.

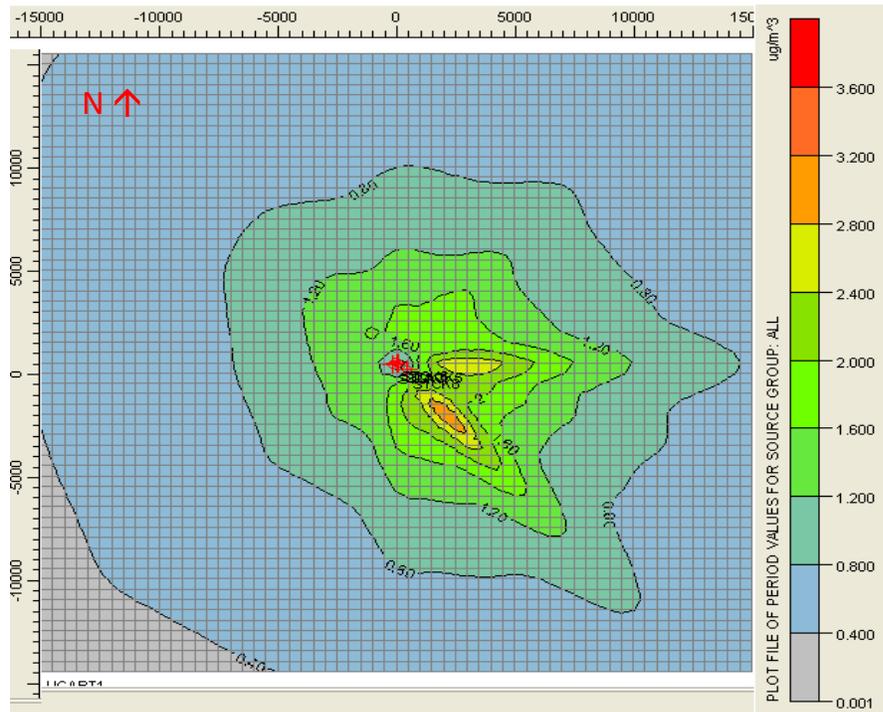


Figure 5: Contours of Average Concentrations of NO₂ in summer: Scenario 1

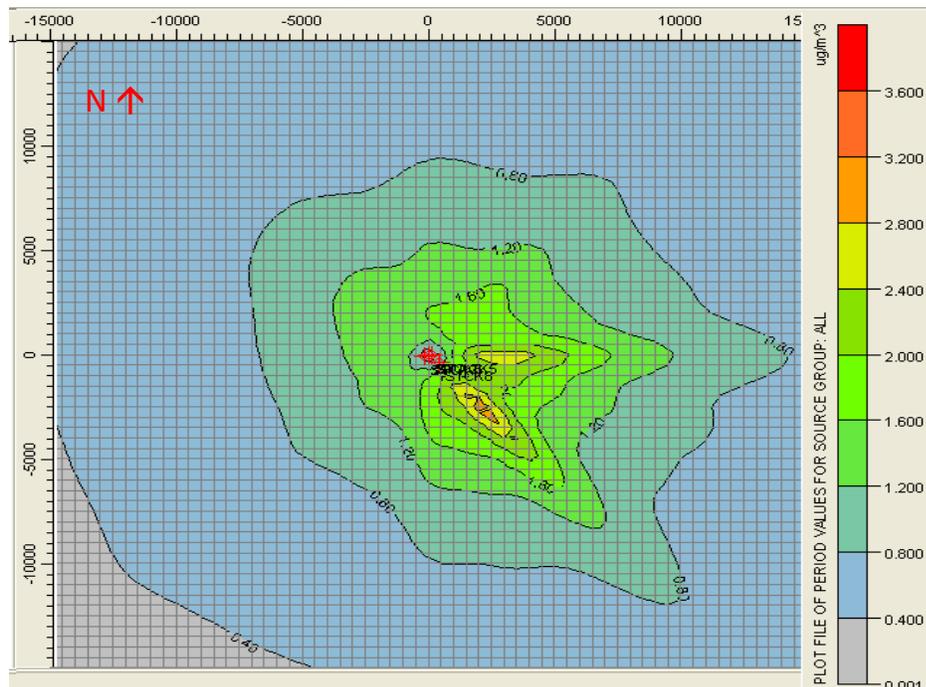


Figure 6: Contours of Average Concentrations of NO₂ in summer: Scenario 2

iii) **SO₂ Concentrations:** Contours of average concentrations of SO₂ for the period 1st March to 31st May 2012 under scenarios 1 and 2 are shown in **Figures 7 & 8**. The maximum value of average concentrations of SO₂ in winter for the study area of size 15km x 15 km for the whole period are 2.62 and 2.76 µg/m³ at (2000m, -2500m) under scenario 1 and 2 respectively.

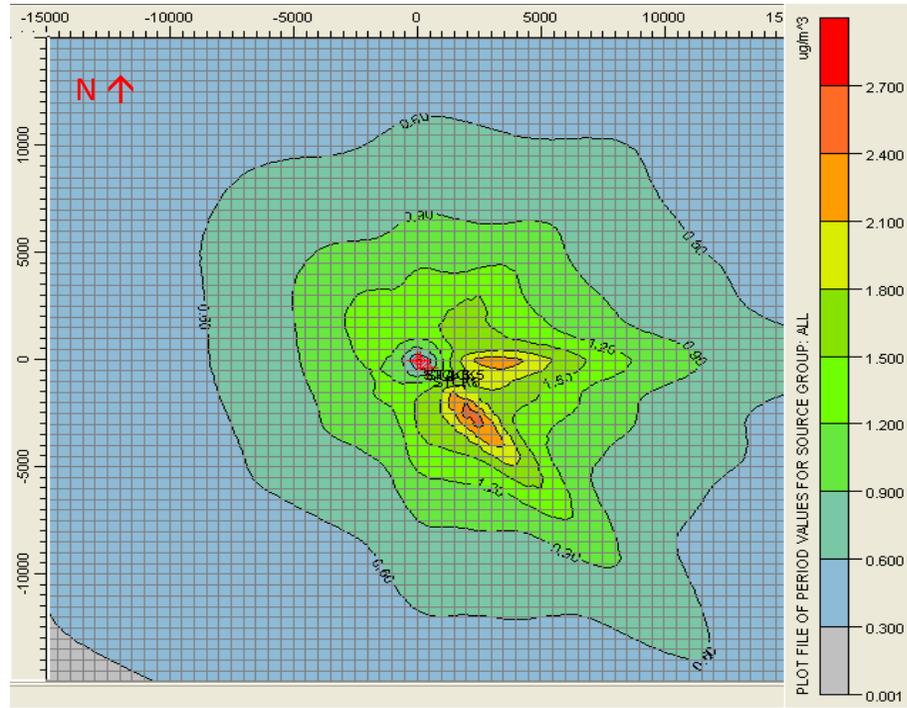


Figure 7: Contours of Average Concentrations of SO₂ in summer: Scenario 1

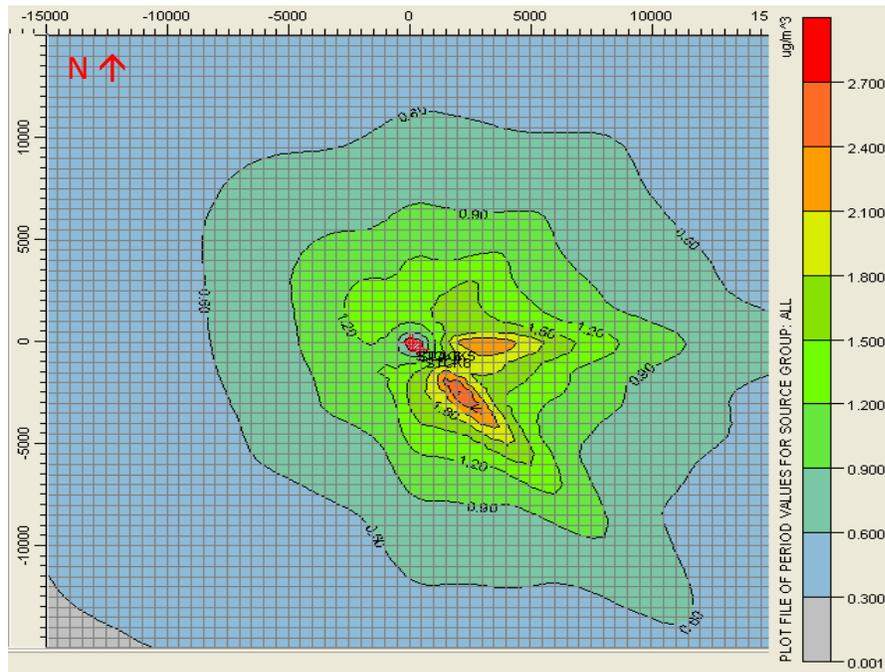


Figure 8: Contours of Average Concentrations of SO₂ in summer: Scenario 2

b) Winter Season

The results of AERMOD run for winter season for the period 1st December 2011 to 31st January 2012 are given here. The windrose for this period is presented in **Figure 9**. The prominent directions during December and January are from North West (NW), North (N) and North North West (NNW) with a Calm percentage of 39.7%.

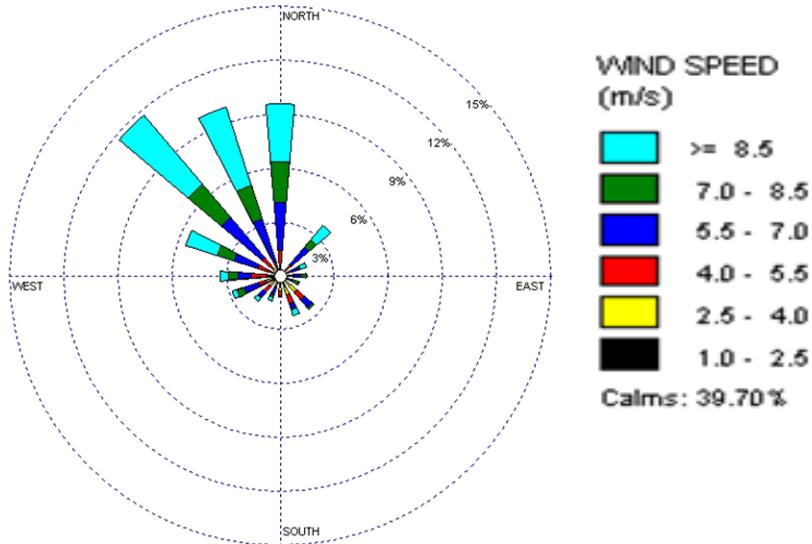


Figure 9: Windrose of Winter Season

i) TSP Concentrations: Contours of average concentrations of TSP for the period 1st December 2011 to 31st January 2012 under scenarios 1 and 2 are shown in **Figures 10 & 11**. The maximum value of average concentrations of TSP in winter for the study area of size 15km x 15 km for the whole period are 1.9 and 1.7 $\mu\text{g}/\text{m}^3$ at (0,-2000) under scenario 1 and 2 respectively .

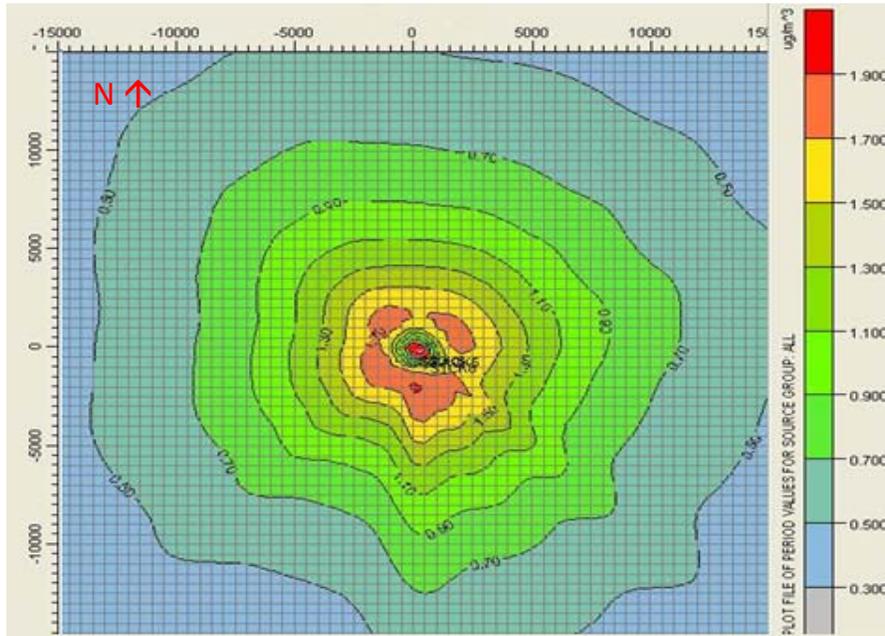


Figure 10: Contours of Average Concentrations of TSP in winter : Scenario 1

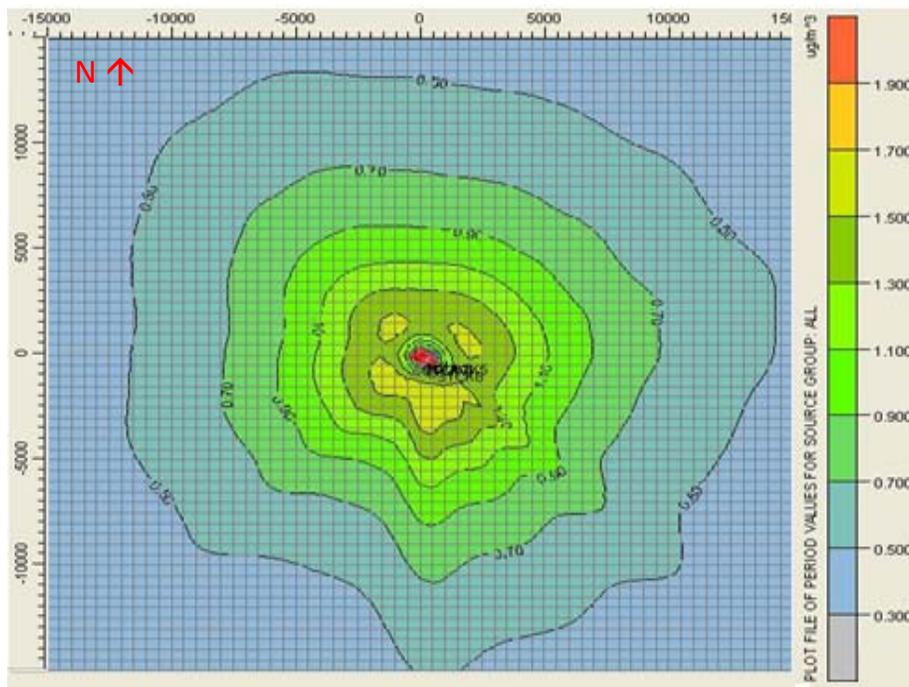


Figure 11: Contours of Average Concentrations of TSP in winter : Scenario 2

ii) **NO₂ Concentrations:** Contours of average concentrations of NO₂ for the period 1st December 2011 to 31st January 2012 under scenarios 1 and 2 are shown in **Figures 12 & 13**. The maximum value of average concentrations of NO₂ in winter for the study area of size 15km x 15 km for the whole period are 4.0 and 3.8 µg/m³ at (0,-2000) under scenarios 1 and 2 respectively.

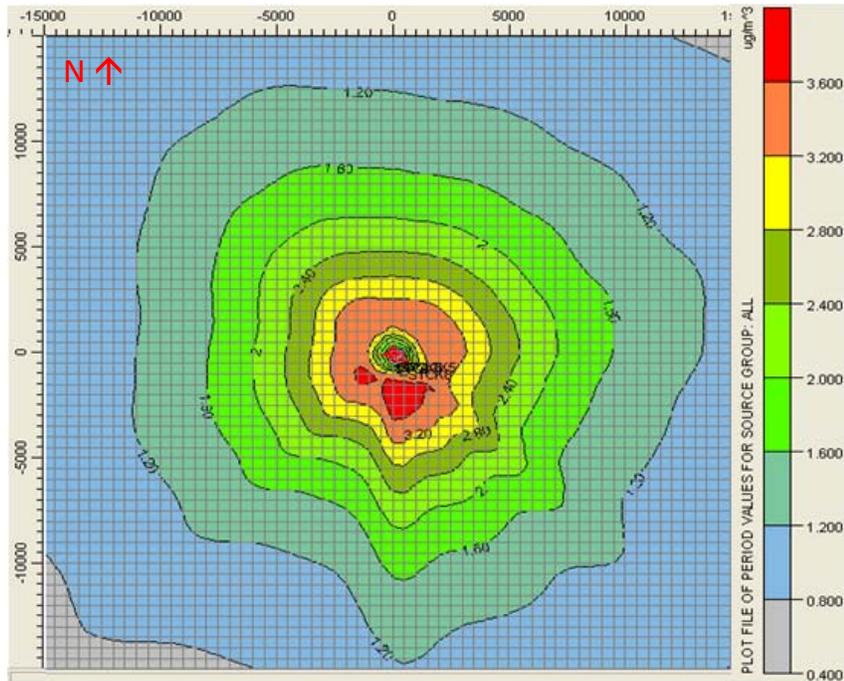


Figure 12: Contours of Average Concentrations of NO₂ in winter: Scenario 1

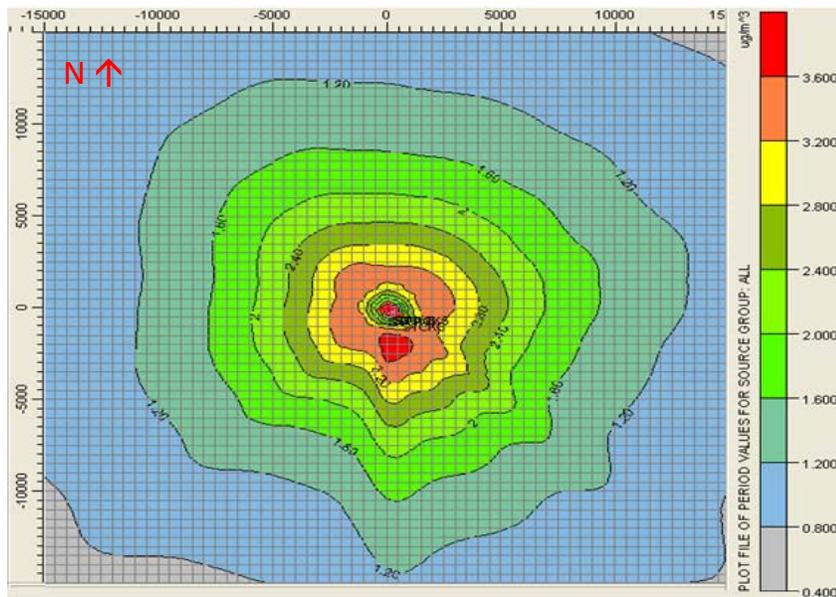


Figure 13: Contours of Average Concentrations of NO₂ in winter: Scenario 2

iii) **SO₂ Concentrations:** Contours of average concentrations of SO₂ for the period 1st December 2011 to 31st January 2012 under scenarios 1 and 2 are shown in **Figures 14 & 15**. The maximum value of average concentrations of SO₂ in winter for the study area of size 15km x 15 km for the whole period are 3.33 and 3.37 µg/m³ at (0,-2000) under scenario 1 and 2 respectively.

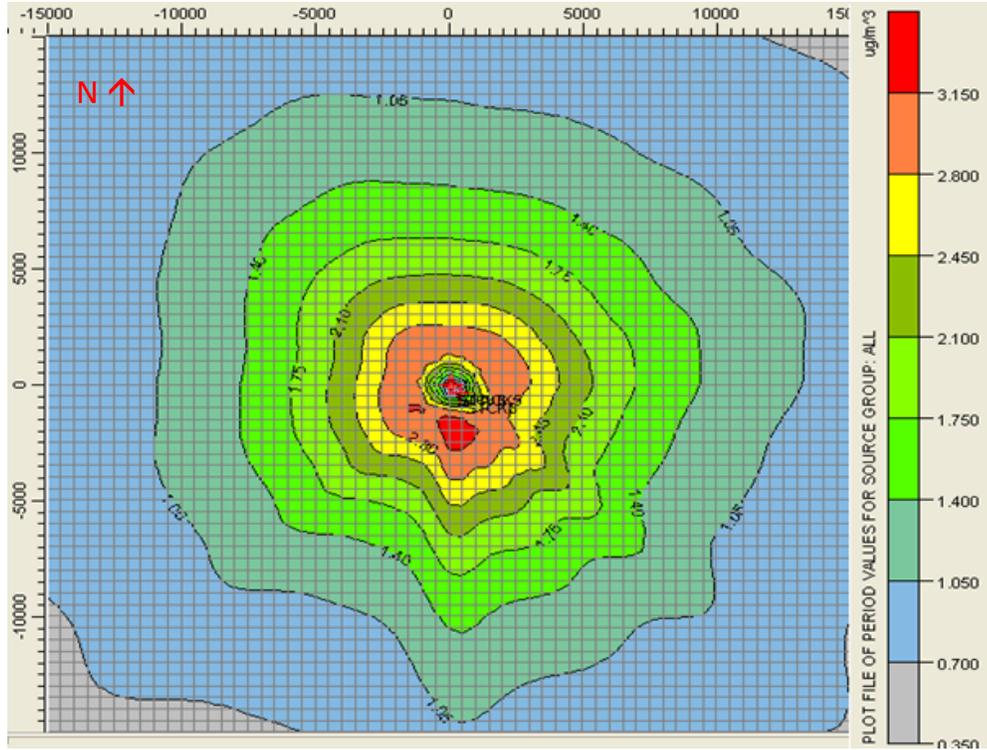


Figure 14: Contours of Average Concentrations of SO₂ in winter: Scenario 1

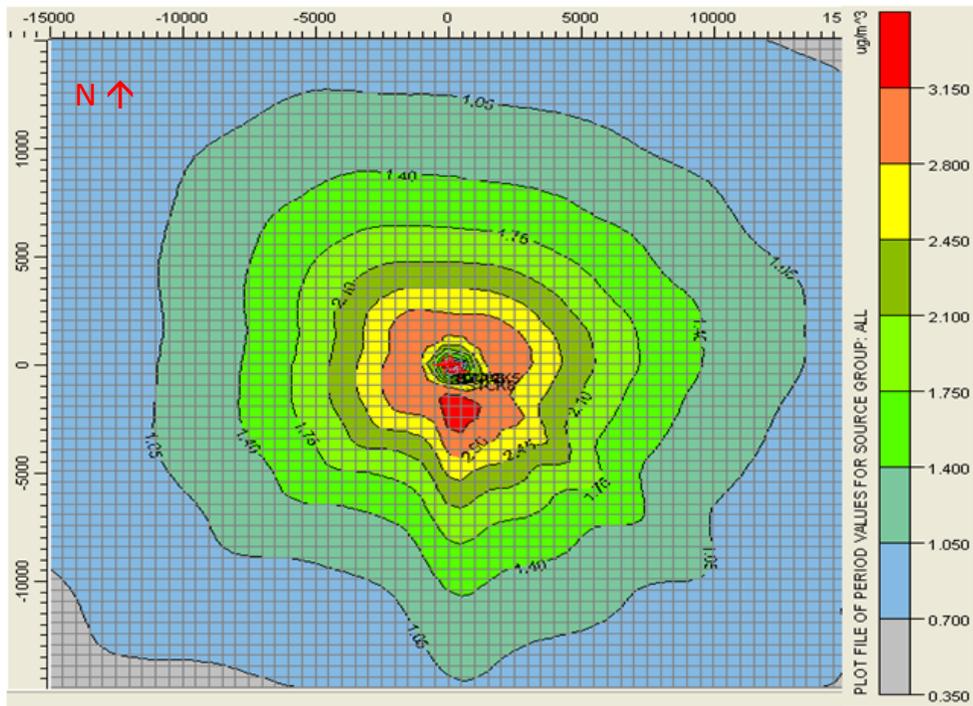


Figure 15: Contours of Average Concentrations of SO₂ in winter: Scenario 2

6.4 Summarization of Modelling Results

Summarizing the different scenarios under summer and winter seasons, the results are given in **Table 9**.

Table 9: Maximum of Average Concentrations, Location & Emissions from Stacks 5, 6, 7 and 8

Parameter	Scenario	Emission (g/s)				Average Max. Concentration in $\mu\text{g}/\text{m}^3$	Location
		U#5	U#6	U#7	U#8		
Summer							
PM	Scenario 1	70	49	0	38	1.54	(2000, -2500)
	Scenario 2	70	29	0	38	1.36	(2000, -2500)
NO ₂	Scenario 1	129	99	19	64	3.17	(2000, -2500)
	Scenario 2	129	97	19	64	3.06	(2000, -2500)
SO ₂	Scenario 1	110	110	0	55	2.62	(2000, -2500)
	Scenario 2	154	39	0	77	2.76	(2000, -2500)
Winter							
PM	Scenario 1	70	49	0	38	1.92	(0, -2000)
	Scenario 2	70	29	0	38	1.67	(0, -2000)
NO ₂	Scenario 1	129	99	19	64	3.95	(0, -2000)
	Scenario 2	129	97	19	64	3.84	(0, -2000)
SO ₂	Scenario 1	110	110	0	55	3.33	(0, -2000)
	Scenario 2	154	39	0	77	3.37	(0, -2000)

Thus the modeling carried out for two seasons, summer and winter showed that the maximum of the average concentrations in these 2 seasons are not much different. The location of the maximum concentration is different. Under summer, location of maximum concentration is about 3 km towards south east (SE) direction, whereas in winter, location of maximum concentration is about 2 km towards the south direction which are located within sea.

6.5 Comparison of the Results of Modeling by ISCST3 and AERMOD

Table 10 shows the maximum of average values for the period 1st March 2012 to 31st May 2012 under scenarios 1 and 2 predicted with two mathematical models ICST3 and AERMOD.

Table 10: Maximum of Highest Concentrations of Average Values for the Summer Season Under Scenarios 1 and 2

Scenario	PM ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
ISCST3			
Scenario 1	2.24	3.91	4.58
Scenario 2	1.94	3.85	4.43
Change	-0.3	-0.06	-0.15
Change %	-13.4	-1.5	-3.3
AERMOD			
Scenario 1	1.54	2.62	3.17
Scenario 2	1.36	2.76	3.06
Change	-0.18	0.14	-0.11
Change %	-11.7	5.3	-3.5

ISCST3 –Location is about 4.5 km towards South-East direction within sea.

AERMOD–Location is about 3 km towards South- East direction within sea.

Comparing the results of modeling using two mathematical models ISCST3 and AERMOD under summer season we observe that the results are comparable and not much different.

7. Environmental Impact and Mitigation Plan

7.1 Impact during Construction Phase

7.1.1 Impact on Air Quality

Particulate matter is the predominant pollutant affecting the air quality during the construction phase, especially during dry condition. Major construction activities responsible for dust and gaseous emissions are as mentioned below:

- Excavation and earth work for foundations
- Civil work at site
- Vehicles transportation for sourcing of building material to site.

Dust suppression by spraying of water will reduce these impacts considerably. The impact due to additional vehicles plying during the construction period is of temporary nature and their impact on air quality will not be significant.

7.1.2 Impact of Noise Level

The major noise generating source during the construction phase is vehicular traffic, construction equipments like dozer, scrapers, concrete mixer, crane, generators pumps, and compressor, rock drills, pneumatic tools, vibrators, etc. During construction, these equipments will generate noise

ranging between 75-85 dB (A). This can be mitigated by providing proper Personal Protective Equipment (PPE's) to the labours working at site.

7.1.3 Impact on Water Quality

Approximately 1000 temporary workers are expected to be involved in construction phase. It is expected that most of the construction workers may be made available from the nearby areas in the vicinity of the project site. No migration of workers is envisaged for this project. Since, only local workers would be engaged for the project, sanitation problem is not expected. Existing sanitation facility will be provided for the workers working during the construction phase. So the overall impact on water environment due to construction of proposed project is likely to be temporary, short term and insignificant.

7.1.4 Impact on Soil Quality

This is a modernization project and all the construction activities will be limited for the plant area only. Therefore, no additional impact on the soil quality is expected due to construction activities within the plant and surrounding area.

7.1.5 Impact of Solid Waste Generation

Solid waste during the construction phase will consist primarily of scrap building materials, excess concrete and cement, rejected components and materials, packing and shipping materials (pallets, crates, Styrofoam, plastics etc.) and human waste. It is expected that there will be generation of sizeable amount of garbage, which will be taken care by the existing solid waste management practices of TTPS. Hazardous waste will be stored separately and disposed off appropriately using the facilities already existing for the plant.

7.1.6 Impact on Land Use

As the proposed project is a modernization project, therefore, most of the facilities already existing shall be used. Site is already having industrial land-use; hence no change in land-use is envisaged due to the proposed modernization.

7.1.7 Impact on Ecology

Trombay already has built up areas including operational areas, plants, stores, offices, etc. Removal of vegetation is not expected and all the construction work will be carried out in the premises of the existing plant. The green belt will also be strengthened to contain the dust and

noise due to various activities. Hence no significant impact on ecology is expected during construction phase.

7.1.8 Impact on Socio-Economics

In addition to the opportunity of getting employment as construction labourers, the local population would also have employment opportunities in related service activities like commercial establishments, small contracts/subcontracts and supply of construction materials for buildings and ancillary infrastructures etc. There will be positive impact for the local workforce during construction phase of the project.

7.2 Impact during Operation Phase

7.2.1 Impact on Air Quality

Prediction of impacts on air environment has been carried out using Industrial Source Complex (ISCST3) and AERMOD to find out Maximum of average Ground Level Concentration of PM, SO₂ and NO_x. Two scenarios were developed, scenario 1 represents Ground Level Concentration (GLC) of existing operations due to TTPS and scenario 2 represents GLC after proposed modernisation. The results of ISCST3 and AERMOD models are given in **Table 10**. The results of these two models are comparable. After the implementation of proposed modernisation project there will be reduction in level of PM, SO₂ and NO_x due to installation of pollution control equipments like ESP, FGD etc. Therefore, the proposed modernisation project is not likely to have any significant adverse impact on the ambient air quality of the surrounding area.

Fugitive Emission: The modernization of Unit #6 will increase coal consumption of the entire TTPS, thus increasing the coal handling. TTPS has existing captive coal berth facility which is proposed to be augmented by additional coal handling and unloading equipments. Fugitive emission control will be done by covering all the conveyor belts carrying coal, setting up of dust suppression system, strengthening green belt around coal yard etc.

7.2.2 Wastewater Treatment and Disposal

There will not be any additional water requirement for the proposed modernization project. Presently Unit # 6 requires 66,000 m³/hr of sea water for condenser cooling. There will not be any additional fresh water requirement due to the proposed project. The discharge water will meet all the norms prescribed by Maharashtra Pollution Control Board (MPCB) as per the existing Consent to Operate. Domestic effluent will be treated in Sewage Treatment Plant (STP)

and the treated water will be utilized for gardening and for spraying on coal. Hence there will not be any significant negative impact on water resources in the study area due to proposed project.

7.2.3 Impact on Noise Level

Noise level within the plant boundary of TTPS is found to be within the prescribed ambient standard. Adequate protective measures during operation phase will be provided in the form of earmuffs/ ear-plugs to the workers working in high noise areas. All the necessary noise protective equipment will be supplied to workmen operating near high noise generating sources. In addition, lower exposure can be achieved by carrying out remote operation where ever possible.

7.2.4 Impact on Ecology

The impacts of pollutants were identified. Air dispersion modelling is carried out to delineate its concentrations at different locations. The modelling results reveal that; the resultant concentrations for study period are within the limits as per National Ambient Air Quality Standards. Hence impact on ecology is not expected.

CMFRI has also carried out the rapid marine impact assessment study to quantify the impact on marine ecology due to the additional barge movement into the sea. The result shows that there will not be any adverse negative impact on marine environment due to increase in barge movement for carrying coal to captive coal berth of Tata Power due to adaptation of best practices during the present operations.

7.3 Environmental Monitoring

TTPS being an existing company for a long time, it has all the necessary monitoring system in place. The same shall remain operational for further monitoring in future. After the conversion to coal, the process monitoring for FGD and other units shall be installed and operated.

7.4 Additional Studies

Central Marine Fisheries Research Institute (CMFRI), Mumbai has conducted the Marine Impact assessment with a view to assess the current status of the marine biology and ecology of the area. Based on the their study which has considered the fish diversity and other aquatic life, it is expected that ecology of the region shall not be affected. Since the quantity of wastewater is

unlikely to change from its current state, the increase in ambient water temperature shall be similar and within the limit prescribed by MPCB in consent to operate.

The public hearing was conducted as per the procedure prescribed in EIA notification 2006 and its amendment till date. The EIA report has been finalized after addressing concerns raised and changes suggested during Public Hearing. A statement of issues raised by the public during the public hearing and point-wise reply to the mentioned issues is also attached as **Annexure I**.

8. Environment Management Plan

Environment Management Plan has been prepared for construction and operation phase to mitigate the impact arising from the project site as given in EIA Study report prepared by TCE. However, based on the review of the report and also the project plans, some of the major activities which shall need attention and proper EMP are delineated below:

8.1 Construction Phase

The impacts due to construction activities are for a limited period and confined to the areas of construction except for transportation of material to the site and disposal of wastes, as necessary. The EMP given in EIA report is found to be adequate and shall be able to address most of the issues.

In addition to the EMP specified in the EIA report, following measures can further enhance the effectiveness of the same, keeping in view the need to demonstrate to the general public as also authorities the levels of upkeep and discipline desired. TTPS may coordinate with a group of citizens, MPCB personnel, health professional (KEM Hospital based Environment Pollution Research Centre - EPRC) and representative of reputed academic/scientific institution such as IIT/VJTI to regularly update the status of environment related measures and their compliances.

The above suggested group can also coordinate later during operation phase to alleviate the fear about operational increase in pollution. All the monitoring data and system shall be shared with the group every month.

8.2 Operational Phase

One of the major issues which have also been highlighted in public hearing as also from the overall concern is related to air pollution from the unit #6 after the conversion from oil to coal.

The operational phase EMP suggested in EIA studies is adequate and shall be able to cater to the need for maintaining the air quality norms specified for TTPS.

However, to further strengthen the EMP suggested in EIA report, following measures should be integrated with the proposed EMP.

Air Quality Management

- Electrostatic Precipitator (ESP) of adequate efficiency shall be provided to limit the particulate matter emission to 50 mg/nm³. In case of any malfunctioning wherein there are chances of exceeding the above limit, the system alert shall initiate the shutdown of the system keeping all the necessary safety aspects of the plant shutdown operation.
- A seawater scrubbing FGD unit, treating 100% of the flue gas flow from Unit #6 shall be installed, achieving 90% removal of SO₂ from the flue gas. This will help to maintain stringent SO₂ emission standard of 24 MT/day from TTPS.
- The monitoring system shall be such that it shall record the overall emission as also diurnal variation with a view to understand the possibility of very high emission at sometime of the day which in adverse climatic conditions may result in contribution to higher ambient air quality.
- Low NOx coal burners shall be installed. The same shall be checked for efficiency every year to assess the efficiency of NOx production. This shall be linked with NOx monitoring as well.
- Process interlocking system will be provided to trip off the complete process in case of failure of ESP and FGD
- Low Ash Low Sulphur coal shall be utilised, whose Sulphur level should be checked and communicated to MPCB every month as a compliance record.

Fugitive Emission Control

Besides the various measures suggested and listed in EMP for fugitive dust control, following additional measures shall enhance the efficiency:

- Creation of wind barrier should be such that the barrier level is almost 2 m higher than the coal stock pile
- Water sprinkling system should be around the coal yard as a diffused fine water (fog type) spray which arrests the dust much better and avoid coal mud formation which gets carried away.

- As an additional measure, around the coal stock pile, a pucca storm water drain should be created with sedimentation system to prevent any coal escaping outside the coal yard and in waterways or roads.
- Road area should be cleaned adequately on regular basis to avoid any re-suspension of dust in atmosphere.

Water Pollution Management

- Process effluent water will be re-circulated within the process where possible. Where this cannot be re-circulated it will be treated to a suitable level and will be discharged to the sea;
- Adequate treatment of FGD water to be ensured before discharging into the sea
- Online temperature measurement shall be installed in the discharge channel
- A programme of ongoing monitoring shall be implemented to ensure that any discharge of process effluent water continues to meet required standards;
- No wastewater or waste materials will be discharged to ground;
- Regular dredging shall be carried out in the discharge channel so that the discharge channel would give the adequate cooling effect
- STP treated water shall be used for gardening and for coal dust suppression
- It is suggested to explore possibility of shifting of mangroves from the discharge channel within the plant premises elsewhere. This will open more area for the water to cool down in the channel itself. This may further increase the efficiency of cooling water channel to bring down the temperature of water to ambient level.
- Rainwater harvesting shall be carried out as per plan.

Others

- Solid waste management
- Ecosystem preservation
- overall area improvement

9. Project Benefits

The proposed project is likely to result in significant reduction in cost towards to power generation due to less price of coal compared to fuel oils or natural gas. Some of the major benefits by implementing the proposed modernization project considering the physical infrastructure.

The financial benefit of reduced cost of generation will result in lower tariff for Mumbai Consumers. Variable cost will be nearly one third at current costs which may reduce further in future. Complete utilization of installed generation capacity at TTPS leading to more reliability on power generation especially in the current scenario of transmission restraints in import of power to the City of Mumbai.

Advanced Pollution Control Equipment viz. ESP and Flue Gas Desulphurizer (FGD) will be installed which will result in overall reduction of pollution loads compared to current air pollution load. These changes in Unit #6 will allow it to operate at full load and will make the system more stable during islanding operation.

10. CSR Activities

A budget of Rs. 741 lakhs have been provided for the next 5 years to carry out various CSR activities in nearby area of TTPS as detailed in EIA report.

11. Outreach Activity for Overall Improvement of Air Quality in Chembur Region

It has been seen that till few decades back, Chembur was called one of the worst air quality affected regions. However, based on multiple intervention by the state and central government as also from industries in the region, the air pollution levels have declined. Though there are hot spots in the area where air pollution levels are high and need to be addressed. Some of these are traffic junctions, garbage burning, medical waste incinerator, biomass burning and some episodic increase from industries. The sensitivity towards air pollution in Chembur area is justified and therefore there is a need to evolve system and framework which will provide the confidence that all sectors will work towards reduction in air pollution as also overall improvement of environment of the region.

It would be desirable if a carrying capacity approach is planned and implemented through joint efforts of all the industries in the region, MCGM and other stakeholders. This effort shall be able to address the issue in whole and suggest actions for all sectors of pollution which are vehicles, industries, biomass burning, MSW Deonar site burning, biomedical waste incinerator, re-suspension of dust etc. Major industrial houses in Chembur should form a joint team and coordinate with everyone's aim of better air quality.

12 Conclusions and Recommendations

The review of the EIA report and processes was undertaken with a view to understand the possibility of any improvement as also fill gaps, if any. The analysis with regard to various environmental attributes were undertaken especially the air pollution potential of the plant when its unit shifts from oil to coal. It is apparent through the EIA studies undertaken by the company that possible impacts have been considered. Some of the major salient features are:

- The proposal is not for a new plant but to use a different fuel from currently used oil to imported coal for economic reasons which will enable to produce power at an affordable cost.
- The overall plant configurations and its working is not likely to change as all the existing system will be optimized, except the necessary installation of FGD (Flue Gas Desulphurization unit) and ESP.
- The safeguard included in the plant is for control of SO₂, NO_x and Particulate Matter. Of these three, the FGD is proposed for SO₂, which will keep the maximum limit of 24T/day prescribed for the plant in the past. This limit is not proposed to be enhanced. Similarly PM will be controlled through ESP (Electrostatic Precipitator) which is of the type that it shall allow it to keep within the limit prescribed by MPCB. For NO_x, low NO_x burners are provided.
- The simulation of current operation and prediction using model ISCST3 was carried out and it indicates that the overall air pollution will actually come down marginally due to better air pollution control equipments proposed for coal conversion project.
- To further confirm and cross check the fact and also to include winter season which is critical the modelling was also carried out using state-of-the-art regulatory model of the US, called AERMOD for both summer and winter seasons. It was evident that the values were in the similar range as predicted by ISCST3.
- The impact of fugitive emission has been addressed through the use of closed conveyor system for coal, spraying of water and closed vehicle conveyance of flyash.
- Ecological study of the region by CMFRI has amply clarified that the overall no change is expected due to change in fuel as the hot water discharge quantity remains the same.
- The current operation of Tata Power has not witnessed any unusual operation leading to episodic high level of emission as all the units are interconnected with a system that if emission control system malfunctions, the power operation gets shut down. Most of the O&M of control units are based on modular design of the system and therefore not likely to high emission during maintenance.

13 General Recommendations

Though Tata power current proposed plan of change in fuel is carefully planned and designed not leading to higher air pollution or water pollution, however, the desire of better air quality in the entire region of Chembur could be achieved through better understanding of sources, their diurnal variation, health impacts and plan for continual improvement. Some of the recommendations given hereunder are generic and would go a long way in addressing the issue of air pollution in larger context.

- There is a need to undertake a carrying capacity study of Chembur Region through a coordinated efforts of MPCB, Industries, MCGM and other institutions who can contribute to the knowledge of air pollution monitoring, modeling, exposure assessment, control options and efficiencies and planning.
- The awareness based on right to information and knowledge is key to address public concerns and therefore a socio-scientific interaction is needed with local stakeholders.
- TTPS may coordinate with a group of citizens, MPCB personnel, health professional (KEM Hospital based Environment Pollution Research Centre - EPRC) and representative of reputed academic/scientific institution such as IIT/VJTI to regularly update the status of environment related measures and their compliances.
- The Chembur area transportation plan needs a special attention due to haphazard parking of tankers and illegal repair garages etc.
- Tata Power may take a lead in formation of an integrated plan with commitments from other major industries as well in the area which shall be useful to allay any fears and misinformation to the general public.

**MINUTES OF PUBLIC HEARING
OF PROPOSED MODERNIZATION IN RESPECT OF
M/s. Tata Power Company Limited,
VILL: MAHUL, CHEMBUR, MUMBAI 400-074**

Date of Public Hearing : 15/01/2013
Time : 11.00 hrs
Venue : R.C.F. Krida Kendra,
Opposite Jawahar Vidhya Bhavan,
Near Aashish Theater, R.C. Marg,
Chembur, Mumbai-400 074

Preamble:

M/s. Tata Power Company Limited, Mahul, Chembur, Mumbai has submitted proposal for "Modernization of existing Unit No. 6 (500 MW) by change of fuel from LSHS/LSFO to low sulphur imported Coal" to M.P.C. Board. The matter regarding said proposal was discussed in 38th meeting of Expert Appraisal Committee meeting held on 12th -13th December 2011 and the proposal was recommended to Ministry of Environment and Forest (MoE&F) Govt. of India New Delhi. Ministry of Environment and Forest, Govt. of India New Delhi issued their Terms of Reference (TOR) for said projects vide letter no- J-13012/121/2011-IA.II(T) dated 25th January 2012 and vide no. J-13012/121/2011-IA.II(T) dated 24th August 2012. It has been mentioned in the TOR that after preparing the Draft EIA covering the issues mentioned in the TOR, same shall be submitted to the SPCB for conducting the public hearing as per procedure of EIA Notification, 2006 and the issues emerged during the public hearing shall be further incorporated in the Draft EIA report. As per the provisions of the EIA Notification, Ministry of Environment & Forest, Govt. of India dated 14th September 2006 as amended thereto, such projects requires public hearing prior to environmental clearance from the Ministry of the Environment Forest, Govt. of India.

Accordingly, project proponent, M/s. Tata Power Company Limited submitted an application to Maharashtra Pollution Control Board (MPCB) for conducting Public Hearing as per the provisions of EIA Notification -2006 and TOR issued by MoE&F, Govt. of India New Delhi. In this connection, MPC Board decided to hold public hearing in respect of the said projects on 15th January, 2013 in consultation with District Collector, Mumbai (Sub-urban). Maharashtra Pollution Control Board published public notices in Marathi newspaper namely "Maharashtra Times" and English newspaper "Indian Express" on dated 14/12/2012 mentioning about date, time & venue of Public hearing. The appeal was made to concerned to submit objections, suggestions, complaints, comments, if any, in respect of the said project to concerned regulatory authority (Expert Appraisal Committee), it was also mentioned that written responses will be accepted by regulatory authorities till the date of public hearing and during the course

of public hearing also. The banners indicating event were displayed at prime location in Mahul, Gavan, Ambada village, near Ashish Theater and on the main gate of Tata Power Co. Ltd. which are at close proximity of the project. Also the scroll type advertisement was given on local cable television channel namely "BTV Superhit Channel, BVC Channel (Bhawani Viewers Choice), Upasana Channel and Omkar Channel" so as to arrange wide publicity in the said vicinity. The venue for the said public hearing was decided at R.C.F. Krida Kendra, Opposite Jawahar Vidhya Bhavan, Near Aashish Theater, R.C. Marg, Chembur, Mumbai-400 074. The said venue was finalized considering easy accessibility to local peoples and close proximity to the proposed project site.

Copy of draft E.I.A. report along with executive summary in respect of the said project were made available in English/ Marathi in the following offices to apprise the public.

- 1) District Collector, Mumbai Suburban District, Administrative Building, 10th Floor, Near Government Quarters, Bandra (East), Mumbai-400 051.
- 2) Environment Dept. Govt. of Maharashtra, 15th floor, New administrative Bldg. Mantralaya, Mumbai-400 032
- 3) Asstt. Commissioner, B.M.C., M-West ward, Chembur Station Road, Chembur (E), Mumbai- 400 071.
- 4) General Manager, District Industry Centre/ Directorate of Industries, ICL Bldg., Opp. Tata Nagar, V.N.Purav Marg, Chunabhati (E), Mumbai-400 022.
- 5) Regional Officer (HQ), MPC Board, Kalpatru Point, 3rd floor, Opp. Cine Planet Cinema, Nr.Sion Circle, Sion (E), Mumbai- 400 022.
- 6) Regional Office- Mumbai/ Sub-Regional Office, Mumbai-3, Shri Chatrapati Shivaji Maharaj Mandai Municipal Market Building, 4th Floor, Mata Ramabai Ambedkar Road, Mumbai- 400 001

All these authorities were requested to arrange wide publicity within their respective jurisdictions.

A public hearing panel comprising of the following members was constituted by Maharashtra Pollution Control Board in accordance with the EIA Notification dated 14th September, 2006 and as amended thereto issued by Ministry of Environment and Forest, Govt. of India.

- | | | | |
|----|---|---|----------|
| 1. | Shri. Dr. Shivaji Patil
Addl District Magistrate,
Mumbai suburban Dist. | - | Chairman |
| 2. | Shri. Dr. J. B. Sangewar
Regional Officer,
Maharashtra Pollution Control Board, Mumbai. | - | Member |
| 3. | Shri. P.V. Patil
I/c. Sub-Regional Officer, Mumbai-III
Maharashtra Pollution Control Board, Mumbai. | - | Convener |

MINUTES OF PUBLIC HEARING:

At the outset, on behalf of convener of the public hearing panel, Shri. R.R. Vasave, Sub-Regional Officer Mumbai-II, MPCB welcomed all those present and commenced the public hearing. He apprised the people with the introductory information about the purpose of the public hearing and appealed them to come forward with suggestions, complaints, objections & comments, if any, about the environmental aspects of the proposed project. He thereafter requested Hon'ble Chairman to commence the hearing procedure.

Hon'ble Chairman Shri. Dr. Shivaji Patil briefed people about the concept and objective of Public Hearing. He made an appeal to participants & all to attend the public hearing peacefully and place their views regarding Environment aspect. He stated that videography of the said public hearing is being carried out by MPCB as per the procedure laid down in EIA Notification 2006. Chairman further stated that the presentation about the proposed projects will be given by the project proponent and then the questions/ objections shall be raised by participants. He made an appeal to participants to come forward with their name & address before raising any query/objections so that the name of the participant along with views will be included in the proceedings of meeting. Then Chairman requested project proponent to give the presentation of the projects along with its silent features.

On behalf of project proponent, Shri. Anand Gurav, Manager (Environment) made a Power Point Presentation on the Environment aspects of the projects including salient features of EIA Report in Marathi language. The project proponent elaborated the details of proposed project on following grounds.

- Project Description.
- Base Line Data with respect to Air, Water, Land, Noise, Ecology, Settlements, etc.
- Impact likely to occur due to the project on Air, Water, Noise, Hydrology, Settlements and Bio-diversity and forest.
- Mitigation measures and Environment management plan for the project during construction phase as well as operation.
- Other details as outlined in the EIA Report.

In the mean time, people from BJP came with yelling slogans in the pandal. Hon'ble Chairman announced and asked to follow the procedure of public hearing in peaceful manner. He also told that, after the presentation by project proponent, chance will be given to all to express their views/comments.

Thereafter, after completion of presentation by Shri. Anand Gura, convener of Public Hearing announced that the forum is open for question answer. The summary of the same is as below.

STATEMENT OF ISSUES

1. Shri. Raja Chougule, Tilak Nagar, Kurla, Mumbai:

Sr. No.	Issues raised
1	<p>Tata has a brand name in India and they have shared good information about their project. The industrial growth should take place in Mumbai-Maharashtra. But while industries are growing, residents of Chembur will not compromise on health. I would like to oppose this project and would like to tell you that this entire event of public hearing is a well managed drama. Many large industrial projects have been erected irrespective of opposition through public hearing. Tata Group is globally renowned industrial house. The whole world and country is going towards the modernization and utilization of coal is getting banned slowly. MPCB has banned coal in Mumbai's textile mills, then why Tata Power is allowed to produce electricity through this modernization project using coal? Residents of Chembur area are not living in Chembur but they are living in Gas Chamber. BPCL, HPCL, RCF and Deonar dumping ground is already causing lot of pollution and nobody is taking a note of this. Since last 20 years I have worked in 3 polluting industries. I would like to inform you that many aspects are shown while presenting the project, but nothing happens during the actual execution. Coal dust particles will spread out in the surrounding areas and will spread upto 5 to 10 km. Not only Chembur, but these dust particles will go up to Ghatkopar and Vikhroli area also. Once the consent is issued to the project by Authority, no one looks at its implementation. We don't have objection to this project. Consumers must get cheap electricity but company has not given details about storage and disposal of ash created due to burning of 6000 MT coal. I need this information.</p> <p>They will claim tomorrow that generated ash will be given to brick manufacturers. I have visited four such brick manufacturers, but it is to say that, they don't have permission from MPCB. All they claim that generated industrial and domestic effluent will be reused, but in fact they don't. This issue is not only belongs to residents of Chembur, but also belongs to residents of Mumbai and its ill effects will be huge.</p> <p>Already there are problems of Deonar dumping ground, Bio-medical waste etc. in Chembur. Projects should come up there, M/s. Tata power should provide electricity in cheap rate, they shall produce electricity, but using coal is not acceptable.</p> <p>I on behalf of residents of Chembur would like tell you that all this is the drama. We will go to our home after the public hearing. This proposed project may come up here, but I request all people that if Tata Power implements this project then it is our duty to come up on road and protest against the project.</p>

After the speech of Shri. Raja Chougule Shri. Debi Goenka, Environment expert came on mike to raise his concerns, then Hon'ble Chairman asked him to present his views after Tata Power's explanation on concerns raised by Mr. Chougule.

Hon'ble Chairman requested Tata Power to give explanation to the concerns raised by Mr. Chougule. Accordingly, General Manager, Mr. Pradeep Manjrekar came on mike and started explanation about the concerns raised. Meanwhile, Mr. Chougale objected stating that they don't want explanation from Tata Power management, but they want clarification from MPCB officials and Collector office, as permission granting Authority is MPCB and Government.

Once again Hon'ble Chairman explained the process of public hearing to all the participants. He told that the objections raised by the participants will get recorded. It is expected that the project proponent should give appropriate answers to these objections. Video recording of this public hearing proceeding is being carried out by MPCB officials. But Mr. Chougule and rest of the participants unanimously insisted that the explanation should be given by MPCB officials and not by Tata Power.

In this situation, Hon'ble Chairman intervened and once again explained that all your concerns are being recorded here. We have to follow here the procedure laid down in the EIA notification, we have to follow the law and we all can't break the same. But still participants carried out chaos on issue of explanation to be given by MPCB. Once again Hon'ble Chairman tried to explain the procedure of public hearing, but ten to fifteen people from participants gathered near the mike near dais and started speaking thus created the situation of chaos and prevented Tata Power representative from giving explanation.

2. Shri. Subodh Archarya:

Sr. No.	Issues raised
1	Does this Public Hearing have proper representation? Where are municipality representatives? Where are senior citizens? Else abandon the public hearing.

3. One Female representative (Not informed the name):

Sr. No.	Issues raised
1	I this situation of chaos, she hold the mike and started raising the concern: Tata Consulting Engineers (TCE) is a Tata Group company owned by Tata Sons. How can you agree to the project EIA report prepared by in-house consulting firm of Tata Group Company? Neither public opinion is taken nor NGO is consulted for the preparation of EIA report. Drawbacks are not considered while preparation of the report. Why Mumbai's power deficiency is not met by importing power from Shahapur? Dahanu village is declared as Eco Sensitive Zone just because there is production of Chickoo, then why Chembur is not declared as Eco Sensitive Zone due to presence of human being?

During this speech some more participants gathered near the mike and formed the situation of chaos. They were not allowing anybody to speak. Hon'ble Chairman repeatedly requested all the participants present near the dais to observe silence and speak one by one to raise their concern and also allow representative of M/s. Tata Power to give their

explanation. In spite of this, participants maintained the situation of chaos and also started shouting the slogans, complaints in loud noise.

4. Hon'ble MLA Shri. Chandrakant Handore:

Sr. No.	Issues raised
1	<p>At Tata Power, out of 1570 MW already 700 to 800 MW electricity is being generated from coal and 660 MW from oil/gas. Tata Power is claiming that over the period cost of gas and oil have gone high and generation from Unit # 6 is becoming uneconomical. This is forcing Tata Power to use coal which is a cheaper source of energy. I would like to tell you that Tata Group is a leading organization in India and have contribution to the country's development.</p> <p>I would like to say that Chembur is already having large scale industries like BPCL, HPCL, and RCF. As per rule, Chembur's pollution level index must be below 80 points but over the period of time it has increased to 180-160-120 points. Today's pollution is already double than what is should have been. This proposed importing of lakhs of tonnes of coal will add to increase in pollution load in the city which is dangerous to human health. Presently M/s. Tata is producing electricity about 700 to 800 MW from coal and they are not disclosing any information about what measurements are being taken about ill effects of pollution on health of residents of Chembur. M/s. Tata first share the information about pollution control measures in the existing coal based plant. We don't oppose electricity generation. We can understand that there is a power shortage in Mumbai, Maharashtra and India. What is the contribution of Tata Power in the growth of Chembur area?</p> <p>We would like to congratulate M/s. Tata for helping Mahul residents, but due to hot water discharge into the creek from Tata Power, fishes are dying from nearby area of Mahul. Mahul people have lost their fishing business. What actions have been taken by MPCB officials and Suburban Collector on pollution created by trucks/container movement due to BPCL, RCF industries? Why TCE, a Tata group company is appointed to carry out EIA of this project? Why EIA has not been prepared by any other well known Indian organization like NEERI? I came to know that recently Tata Power was giving 500 MW electricity to Reliance which is now diverted to corporate offices, malls, multiplexes and other large industries. If Tata is producing cheap power then why it is not available to middle class society people, hutment residents, various societies etc.? We all should come together and should take some concrete steps to deal with this matter.</p>

After this speech Shri. Raja Chougule from audience asked Hon'ble MLA Shri. Chandrakant Handore to announce that, "We will not allow coming up here this proposed project in any situation". We all residents of Chembur will support you.

Hon'ble Chairman requested participants to use mike and dais for raising the concerns. In the mean time Shri. Debi Goenka-Environment expert and Shri. Ravindra Pawar came near mike to raise his concerns. Hon'ble Chairman asked to give chance to Environment

expert Shri. Debi Goenka to present their views as he always regularly participated in raising the environmental issues in Mumbai. But the people kept on shouting near to mike. In the mean time Shri. Ravindra Pawar started raising his views on mike.

5. Shri. Ravindra Pawar:

Sr. No.	Issues raised
1	<p>In view of residents of Chembur, this Public Hearing is very sensitive. My first objection is about inadequate arrangement made during this Public Hearing. Coal is a dangerous energy source. Even though it is imported, it is still going to pollute the environment and we cannot minimise it's impact. This coal produces dangerous gases like SO₂ and NO_x which are hazardous to human health. Electricity generation from coal requires huge amount of water. As per my knowledge about 2.5 billion gallon water will be used for 500 MW. During the withdrawal of this huge amount of water from sea how many fish eggs & larvae will be destroyed? Have you done studies from environment point of view? Studies conducted at various places by different organisation reveals that around 18 to 20 lakh fishes are getting affected annually. Have you carried out any environmental studies to know the impact of hot water discharge on sea? It will be better if EIA is carried out by some well known environment organization other than TCE. No information is shared about present Chembur's air quality index. As informed by Mr. Handore, air quality index of about 200 point is scientifically considered as unhealthy and known as 'Red Zone'. It was essential to explain about it but not information is given in the report. As shared by Mr. Chowgule, respiratory diseases like chest pain, cough, sore eyes etc. are common in Chembur area. Doctors and Nursing Homes have increased due to this. These dust particles (also known as TSP) are very minute in nature and cannot be seen with naked eyes. They contain harmful chemicals like silicon dioxide, magnesium, aluminum, iron, calcium, titanium, potassium, arsenic, mercury, sodium, sulphur and very less amounts of uranium and thorium. These constituents have harmful effects on health and same are clearly visible from the health of Chembur residents. If already there is so much of pollution in Chembur area then why coal based project is coming up here only? We don't oppose Tata and electricity. Tata's name is trustworthy. Developed countries like America also has banned coal based electricity generating projects. In such scenario, if you are going to produce electricity from coal by letting people suffer and die, then residents of Chembur will oppose it.</p>

After the speech of Mr. Pawar, Hon'ble Chairman explained to all the participants that all issues and concerns raised during this public hearing are being recorded and noted. The issues and concerns raised as of now have been recorded by MPCB officers. As a part of procedure, answers to these questions and concerns are expected from the project proponent. Hon'ble Chairman suggested to officers of Tata Power to note down all the questions and concerns and give collective explanation to these questions. But participants were reluctant to listen to Tata Power and demanded that the explanation should be given by MPCB and collector officials only. They restricted M/s. Tata Power representative from giving explanation on the points raised by the participants.

Meanwhile Environment expert Shri. Debi Goenka came near mike to speak, but participants gathered near dais/mike and started shouting and creating chaos. Some of them insisted that what Hon'ble MLA Shri. Chandrakant Handore declared, all this is acceptable to all residents of Chembur, so stop here the public hearing and take note of all concerns of residents of Chembur. In this situation of chaos, Shri. Debi Goenka started to speak, but participants present near the dais did not allow Shri. Debi Goenka to express his views. Some of participants shouted that Shri. Debi Goenka is not a resident of Chembur, so he should not speak here. In view of such chaos, Hon'ble Chairman then once again requested everyone to occupy their seats and maintain silence.

6. Ms. Seema Mahulkar, Mahul:

Sr. No.	Issues raised
1	The modernization project proposed by Tata Power due to the economic constraint and to meet the power demand of Mumbai City is going to consume more coal and this will increase pollution in Chembur area. There is already effect of pollution on the health of people living in Mahul, Gawanpada, Ambapada, Trombay, Mandala and Mankhurd villages. As informed by Tata Power, company is carrying out various activities like beauty parlor course for women, motorcycle driving for the youth of Mahul area etc. But company is not carrying out any program to address the health effect due to pollution. Tata Power should construct a hospital for treatment of diseases like Asthama and Cancer and should provide free or concessional annual medical check up for the people of this area. Existing project is going to be there but we should also be benefited. If at all we have to oppose then oppose the entire project.

At this time also participants remain gathered near mike/dais and maintained situation of chaos. In this situation, one Lady hold the mike and asked that, "Have you held any health camp? Presently pollution problem has created such a situation that no medicine cures asthma here. Hence we all should assure here that there should not be use of coal in any manner". At this time also situation of chaos remain constant. Hon'ble Chairman repeatedly requested all the participants to keep peace and be seated at their place.

7. Ms. Suprada Prakash Fatarfekar:

Sr. No.	Issues raised
1	I would like to inform you that Chembur stands at 46 th rank in India and first in Mumbai on pollution level Index. There are already industries like RCF, HPCL, BPCL, BARC etc. and Devnar dumping ground which is causing pollution in Chembur area. If any disaster takes place due to these industries then we will not survive here. We do not want any other factory, hospital, etc. here. I would like to know that what measures MPCB has taken for the abatement of pollution in Mahul Village and Ambapada Village? What measures MPCB has taken for the abatement of pollution due to HPCL, BPCL, RCF, AEGIS etc.? Explain us – whether you are in favor of industries or common people? First stop existing pollution due to these industries. I would like to tell you that vomiting, dizziness are old stories, now women are suffering from miscarriages. Who is responsible for this?

8. Ms. Fulabai Sonawane:

Sr. No.	Issues raised
1	I am staying here since 40 years. We should protest these polluting industries. Human life has become 40 years instead of 50 years due the pollution.

At this time also participants remain gathered near mike/dais and maintained situation of chaos constant. Hon'ble Chairman again requested all the participants gathered near dais to keep peace and raise their concerns one by one.

9. Advocate Naina Pardeshi, Chembur:

Sr. No.	Issues raised
1	First of all I would like say that MPCB's request to give chance to Tata Power for answering the concerns raised by public is totally wrong. Because after submission of project documents by Tata Power this public hearing is arranged by MPCB. So this public hearing is for raising our concerns. We have come here to raise our concerns after reading report submitted by Tata Power. My second point is that repetitively it is being informed that the EIA report is prepared by Tata Institute's research. This is totally against natural justice of law. TCE is one of the share holding institute of Tata Group who has prepared this report which cannot be impartial. Hence it is very essential to keep this report aside. Tata Power is frequently claiming that this project is for customers benefit. I would like to tell you that this is totally wrong. Because in the report neither the present rate of electricity is given nor the details about the concession given to the customers after the project is mentioned. Guideline for ash Utilisation is already given by Ministry of Affairs. Cost of Sulphur Dioxide removal plant is in crores of rupees. This cost is not provided in the project by them. Only for our understanding it is said that sea water will be utilised in this sulphur removal project. This is practically not possible. It is not mentioned in the report where sea water will be discharged after washing coal to reduce sulphur dioxide. Secondly, they have mentioned that ash will be utilised for Brick making and mixing in Cement Concrete. Where is such project located nearby? Where this ash will be taken? What are the effects of ash if it is spilled during the transportation? Have they conducted any meetings with Brick making units and cement concrete manufacturers? There are no such details in the project report. I would like to suggest that due to above two things this report should be kept aside.

Hon'ble Chairman once again requested all the participants to maintain silence. He also informed that all presented points are being noted. He asked, though Mr. Goenka is staying outside Chembur area, he is an Environment Expert and should be allowed to express his views by the participants. But present public did not allow Mr. Goenka to come near the mike and express his views.

10. Shri. Vithal Kharatmol:

Sr. No.	Issues raised
1	BJP strongly oppose this coal based project. There was presence of particulate matter in Gavanpada area due to coal transportation and generation of electricity 5 to 6 years back. After having talk with Tata officials, slowly quantity of suspended particles has decreased. Due to this additional coal based 500 MW electricity generation, life of Chembur residents will be difficult. As per recent Medical report, 70% children staying in the area of Chembur, Tromaby and BARC are suffering from Asthama, TB and other skin diseases. M/s. Tata have not done anything for these people. So we strongly oppose this project. We think that instead of using coal M/s. Tata should use oil or natural gas for electricity generation in their project. Our party and people respect Tata Group. M/s. Tata is not a selfish organization. But because of this project, there will be destruction of Chembur, so we strongly oppose this project.

At this time also participants remain gathered near mike/dais and the chaotic situation was increasing time by time.

11. Shri. Gautam Sonavane:

Sr. No.	Issues raised
1	On behalf of Republican Party of India, I am here to oppose coal based project. Republican Party of India has always respected Tata Company. Because of Tata India has witnessed Industrial revolution. M/s. Tata gave equal job opportunities to every individual including poor and backward class of society. We totally support their electricity production. We understand that there is shortage of electricity in Maharashtra, but Chembur and Trombay area is already polluted because of presence of refineries and fertilizer industries. Govandi area is already polluted because of solid waste dumping ground. I request on behalf of Republican Party of India to MPCB that they should not allow this increase in the pollution load of Chembur and Trombay area. This may endanger the life of Chembur resident and may lead to situation like Bhopal Gas tragedy, which should not take place here.

Hon'ble Chairman requested participants to maintain silence and allow representative of Tata Power Company to give explanation on question raised. He also informed to address their issues/concerns in two- two minutes each so as to give chance to all interested participants.

12. Shri. Pramod Vasant Shinde:

Sr. No.	Issues raised
1	<p>I oppose this project on behalf of Shivsena Party. How MPCB can trust this EIA report prepared by TCE? MPCB should not accept this report, but they should reject this report. MPCB should evaluate EIA report carried out by TCE along with verification of environmental monitoring carried out in which period of the year. This EIA report does not include details such as day and time of monitoring. Hence this report should be rejected. I would like to suggest MPCB that an opportunity to be given to an independent organization / agency which is not associated with Tata Group for preparation of EIA report. After this third party evaluation, MPCB should disclose impacts due to this modernization to all public. This modernization will definitely increase power generation from Mumbai and will help in meeting demand and supply gap. I would like to ask question to Tata Power that really this modernization project is necessary in such central and densely populated area? Why can not we purchase electricity from outside to meet Mumbai's power demand?</p> <p>Dahanu is declared as 'Eco sensitive' zone for conservation / protection of Chickoo. Chembur being densely populated should also be declared as 'Eco sensitive' zone. Will Tata Power provide this electricity to residents of Mumbai? Is Tata Power ready to give in writing? I would like to request Tata Power to install solar and wind based projects which are non polluting.</p>

At this time also participants remain gathered near mike/dais. Hon'ble Chairman again requested participants not to assemble near the dais & be seated and address respective issues quietly. But still participants remain gathered near mike/dais.

13. Shri. Vidnyan Daware, Advocate, Vashi Naka, Chembur:

Sr. No.	Issues raised
1	<p>I am staying in Vashi Naka since last 40 years. Coal based power plants are being banned worldwide because of effects of Global Warming which is affecting whole world and the earth. Why MPCB does not enforce guidelines issued by parliament and from Prime Minister? Granting permission for coal based power plant is against National Policy. Guidelines issued by Supreme Court and Government for disposal of ash are not being implemented here. Imported coal is more combustibile than Indian Coal and it contains hazardous elements such as Sulfur dioxide, Nitrogen Oxide, Hydrogen Chloride, Hydrogen Fluoride, Hydrochloric Acid, Arsenic, Cadmium, Chromium, Mercury, ash particles, coal particles and wet ash particulates. There will be possibility of pollution in sea because of spillage of coal during the transportation through sea route. Hence fishing activity will get affected up to several kilo meters.</p>

At this time, participants started shouting and creating situation of chaos. They started shouting slogan "Band Kara Band Kara Public Hearing Band Kara" ("Close down close

down”), and removed mike from Shri. Vidnyan Daware. Hon’ble Chairman again requested participants not to assemble near the dais and maintain the silence & be seated and address respective issues quietly.

14. Shri. Rajendra Mahulkar, Mahul village :

Sr. No.	Issues raised
1	Tata Power’s 750 MW coal based power plant is already operational since so many years. I would like to request all that they should understand the facts. I request MPCB to take concrete steps for benefits of resident and to preserve health of the residents. If at all we have to oppose then oppose the entire project.

During the talk of Shri. Rajendra Mahulkar, present representatives of political parties started arguing and blaming each other on non-environmental issues. Viewing this, Hon’ble Chairman intervened and asked all to raise only environmental issues and not to discuss any other issues. In spite of this, participants remain gathered near mike/dais and maintained situation of chaos.

15. Shri. Anil Patankar:

Sr. No.	Issues raised
1	I am here to say only that, officers of MPCB and Tata are present here, we should not create political issues and not involve in same. If at all we have to oppose the project, we should not involve in political issues. This is the matter of opposition of residents of Chembur to this proposed coal project. I am as a Corporator, here assure all you that we support Hon’ble MLA Shri. Chandrakant Handore in the matter of opposition to this proposed coal project.

At this time also participants remain gathered near mike/dais shouting and creating situation of chaos. Hon’ble Chairman again requested participants not to assemble near the dais & be seated and address respective issues quietly, and informed to put off the mike till they maintain silence. He told that, addressing your views by creating chaos is not proper method. He requested Hon’ble MLA Shri. Chandrakant Handore and Shri. Korgavkar to ask their representatives to be seated and maintain silence. In spite of this, participants remain gathered near mike/dais and maintained situation of chaos.

16. Ms. Rajashree Palande:

Sr. No.	Issues raised
1	Public hearing scheduled by MPCB is just a drama. Will Government implement our suggestions? Such Public hearings are being conducted, issues are being

	addressed but decision is not taken. People are being misguided. We should come together and have to see that how pollution is reduced and to stop the coal based projects.
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Hon'ble Chairman once again asked all to raise only environmental issues and not to discuss any other issues, all you are discussing is not related to environmental issues, so please do not give unusual look this public hearing. But still chaos remains increased. Viewing this, Hon'ble Chairman gain informed to put off the mike till every one maintains silence.

Participants started shouting the slogan "band kara band kara" and still maintained chaos. Hon'ble Chairman requested to maintain silence. He also informed to the participants that there is no provision in the law to postpone this public hearing. He also told the participants, "If your concerns are expressed in proper manner then only it will be recorded. After raising your concerns, you should also listen what M/s. Tata have done in terms of Environmental mitigation in this project. But you all are not willing to listen to any thing what they say. If you listen to M/s. Tata what they are saying, then only you will be in a position to understand real scenario. You are just expressing your views only from your side. You should listen whether M/s. Tata have answer to all your questions or not." In spite of this, participants remain gathered near mike/dais and maintained situation of chaos. Hon'ble Chairman repeatedly requested to maintain silence. But still participants remained shouting slogans, comments etc. and maintained situation of chaos. They shouted the slogans like "Band kara band kara, kolsa prakalp band kara (Close down close down, coal project close down)", "Hon'ble MLA Shri. Chandrakant Handore saheb tum age badho hum tumhare sath hai", " Sarva pakshiya neta tum age badho hum tumhare sath hai".

17. Ex- Corporator (not informed the name):

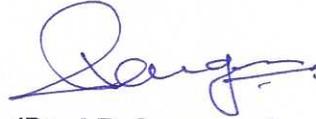
Sr. No.	Issues raised
1	Our demand is to save Chembur from pollution but no one has taken serious note of this. Industries are claiming that they will use low polluting fuels but all industries are situated in Chembur and are polluting the environment. Due to this, the proposed coal project should be opposed.

The people gathered for public hearing continued to shout and started crowding near the mike/dais. Chaos was increasing and situation became very difficult to handle due to the disorderly behavior of the people. The Chairman repeatedly requested to maintain order and silence and cleared that it would be difficult to continue with the public hearing in such of chaotic situation and appealed that the issue can be discussed in a positively manner and explanation to the queries, issues raised by the people shall be given by the company / project proponent. However, the participants did not pay any heed to the appeal made by Hon'ble Chairman and kept on shouting slogans "band kara, band kara, public hearing band kara". The chaotic situation continued to increase. Hon'ble Chairman informed the

participants that all objections, suggestions, complaints, comments etc. are being recorded and the videography is being carried out. He further added that it is necessary to maintain order, discuss the issues and raise your objection, concerned if any; so that it can be included in the report. However no response to this appeal was given by the people and they continue to took out slogans "band kara, band kara, public hearing band kara". The disorderly behavior was increasing and it was felt that the situation might go beyond control. Looking at the complexity of the situation there was no alternative to close the public hearing and accordingly Hon'ble Chairman declared that the public hearing is closed.



(P.V. Patil)
I/c. SRO, MPCB,
Mumbai-III and Convener
of Public Hearing Panel



(Dr. J.B. Sangewar)
RO, MPCB, Mumbai and
Member, Public Hearing
Panel



(Dr. Shivaji Patil)
Additional District
Magistrate, Mumbai-
Suburban and Chairman of
Public Hearing Panel

मे . टाटा पॉवर कंपनी लिमिटेड यांच्या प्रस्तावित आधुनिकीकरण प्रकल्पाबाबत जाहीर
जनसुनावणीचे इतिवृत्त

जाहीर सुनावणीची तारीख	:	१५ .०१ .२०१३
जाहीर सुनावणीची वेळ	:	सकाळी ११ .०० वाजता
जाहीर सुनावणीचे ठिकाण	:	आर .सी .एफ . क्रीडा केंद्र, जवाहर विद्याभवनासमोर, आशिष चित्रपटगृहाजवळ, चेंबूर, मुंबई -४०० ०७४

प्रस्तावना:

मे . टाटा पॉवर कंपनी लिमिटेड यांचे कडून माहूल स्थित, ट्रॉम्बे औष्णिक विद्युत केंद्रातील युनिट # ६ (५०० मेगा वॉट) मध्ये लो सल्फर हेवि स्टॉक (LSHS)/लो सल्फर प्युअल ऑइल (LSFO) इंधना ऐवजी कमी गंधकयुक्त आयात केलेल्या कोळश्याचा वापर करणे नियोजित आहे . त्या अनुषंगाने, प्रकल्पधारकाने पर्यावरण आणि वन मंत्रालय, केंद्र सरकार यांना अर्ज सादर केल्यानंतर, मुल्यांकन तज्ञ समिती (EAC) यांनी त्यांना त्यांच्या दि . १२-१३ डिसेंबर २०११ रोजी झालेल्या ३८ व्या बैठकीमध्ये ट्रॉम्बे औष्णिक विद्युत केंद्रातील युनिट # ६ (५०० मेगा वॉट) मध्ये लो सल्फर हेवि स्टॉक (LSHS)/लो सल्फर प्युअल ऑइल (LSFO) इंधना ऐवजी कमी गंधकयुक्त आयात केलेल्या कोळश्याचा वापर करून आधुनिकीकरणाच्या प्रस्तावाबाबत सुची (Terms of Reference) पत्र क्रमांक J-13012/121/2011-IA.II (T) दिनांक २५ जानेवारी २०१२ आणि पत्र क्रमांक. J- 13012/121/2011-IA.II (T) दिनांक २४ ऑगस्ट २०१२ रोजी जारी केले व पर्यावरण परिणाम अभ्यास अधिसूचना २००६ च्या तरतुदी प्रमाणे पर्यावरण परिणाम अभ्यास अहवालासोबत जाहीर सुनावणीमध्ये उपस्थित झालेले मुद्दे व त्याबाबत प्रकल्पधारकाने दिलेली उत्तरे सादर करण्याचे निर्देश आहेत .

त्यानुसार प्रकल्प व्यवस्थापनाने महाराष्ट्र प्रदूषण नियंत्रण मंडळाकडे (म .प्र .नि . मंडळ) उपरोक्त प्रकल्पाकरीता अर्ज केला असून, म .प्र .नि . मंडळाने जिल्हाधिकारी मुंबई उपनगर यांच्या परवानगीने १५ .०१ .२०१३ ही तारीख निश्चित करण्यात आली . पर्यावरण परिणाम अभ्यास अधिसूचना २००६ च्या तरतुदी प्रमाणे सदर जनसुनावणीची जाहीर सूचना, म .प्र .नि . मंडळाने दिनांक १४ .१२ .२०१२ रोजीच्या मराठी दैनिक "महाराष्ट्र टाइम्स" व इंग्रजी दैनिक "इंडियन एक्सप्रेस" मध्ये नोटीस प्रसिध्द केली व त्यानुसार सर्व संबंधित व्यक्तींना आवाहन करून त्यांच्या सूचना, टीका टिप्पणी, विचार, आक्षेप इत्यादी संबंधित नियामक प्राधिकरण येथे नोंदविण्याबाबत नमुद करण्यात आले होते . सदर जनसुनावणीबाबत माहिती असलेली सूचना फलके हे माहूल गाव, गव्हाण, अंबाडा, आशिष सिनेमागृहाजवळ तसेच टाटा कंपनीच्या मुख्यद्वारावर लावण्यात आले होते . तसेच वी . टि . व्ही . सुपरहिट चॅनल, वी . व्ही . सी . चॅनल (भवानी व्ह्यूवर्स चॉईस), उपासना चॅनल व ओंकार चॅनल या स्थानिक केबल टि . व्ही . चॅनल्सवर स्कॉल टाईप जाहिरात प्रसिध्द करण्यात आली .

कार्यकारी सारांशाची इंग्रजी व मराठी प्रत तसेच पर्यावरण परिणाम अभ्यास अहवालाची प्रत अ) जिल्हाधिकारी कार्यालय मुंबई उपनगर. ब) पर्यावरण विभाग, महाराष्ट्र शासन मंत्रालय, मुंबई . क) प्रादेशिक अधिकारी मुख्यालय, म .प्र .नि . मंडळ, सायन, मुंबई, प्रादेशिक कार्यालय / उपप्रादेशिक कार्यालय मुंबई-३, म .प्र .नि . मंडळ, श्री छत्रपती शिवाजी महाराज महानगर पालिका मंडई, माता रमाबाई आवेडकर मार्ग, मुंबई-१ ड) महाव्यवस्थापक जिल्हा उद्योग केंद्र / उद्योग संचनालय, आय . सी . एल . विल्डिंग, टाटानगर समोर, व्ही एन पुरव मार्ग, चुनाभट्टी (पुर्व) मुंबई-२२ व इ) सहाय्यक म .न .पा . आयुक्त वार्ड ऑफिस, एम/पश्चिम, चेंबूर (पुर्व), मुंबई येथे संबंधितांच्या अभ्यासासाठी ठेवण्यात आलेले होते . उपरोक्त जाहीर सुनावणीबाबत अधिसूचनेमध्ये नमुद केलेल्या पद्धतीचा अवलंब करून प्रसिध्दी देण्यात आली जेणे करून प्रकल्प बाधित अथवा संबंधित व्यक्तींचे आक्षेप, टीका टिप्पणी, विचार अथवा सूचना संबंधित नियामक प्राधिकरणास नोंदविणे सोईचे होईल .

सुनावणीचे स्थळ आर .सी .एफ . क्रीडा केंद्र, जवाहर विद्याभवनासमोर, आशिष चित्रपटगृहाजवळ, चेंबूर, मुंबई-४०० ०७४ येथे ठेवण्यात आले कारण हे स्थळ प्रकल्पाजवळचे असून संबंधितांना येण्यासाठी सोईस्कर असल्याने याठिकाणी जनसुनावणी ठेवण्यात आली .

सदर जनसुनावणी महाराष्ट्र प्रदूषण नियंत्रण मंडळाने केंद्रीय पर्यावरण व वन विभागाची पर्यावरण परिणाम अभ्यास अधिसूचना २००६ मधील तरतुदीप्रमाणे जनसुनावणीचे खालील प्रमाणे समिती गठीत केली होती .

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| १. डॉ. शिवाजी पाटील
अप्पर जिल्हा दंडाधिकारी,
मुंबई उपनगर जिल्हा . | -अध्यक्ष |
| २. डॉ. जि.वा. संगेवार
प्रादेशिक अधिकारी, मुंबई . | -सदस्य |
| ३. श्री. प्र. वि. पाटील
प्रभारी उप प्रादेशिक अधिकारी, मुंबई ३ . | -आयोजक |

जनसुनावणी इतिवृत्तः

जनसुनावणीच्या सुरुवातीस श्री. रा.रा. वसावे उप प्रादेशिक अधिकारी, महाराष्ट्र प्रदूषण नियंत्रण मंडळ मुंबई-२ यांनी अध्यक्ष व उपस्थित अभ्यागतांचे स्वागत करून जनसुनावणीच्या पद्धतीबद्दल माहिती दिली. त्यांनी उपस्थितांना पर्यावरण विषयक सूचना, विचार, आक्षेप इ. घेऊन पुढे यावे अशी विनंती केली. तसेच त्यांनी ही सुनावणी सर्व संबधित लोकांसाठी आयोजित केलेली आहे जेणेकरून त्यांच्या पर्यावरण विषयक प्रश्न व शंकांचे निरसन करण्यात येईल. तदनंतर त्यांनी जनसुनावणी समितीचे अध्यक्ष यांना जनसुनावणीची कार्यवाही सुरु करण्याबाबत विनंती केली.

तदनंतर जनसुनावणी समितीचे अध्यक्ष तथा अप्पर जिल्हा दंडाधिकारी डॉ. शिवाजी पाटील यांनी उपस्थित जनसमुदायास मे. टाटा पॉवर कंपनी लिमिटेड यांच्या प्रकल्पाबाबत आपल्या सूचना, विचार, आक्षेप इ. घेऊन पुढे यावे अथवा लेखी स्वरूपात मांडव्यात, आपण केलेली मत तसेच सूचना, आक्षेप व आपल्या भावना कायदयात नमुद केलेल्या तरतुदीप्रमाणे पर्यावरण व वन मंत्रालय, भारत सरकार, नवी दिल्ली यांना कळविण्यात येतील, सदर सुनावणीचे छायाचित्रीकरण म.प्र.नि. मंडळाकडून कायदयात नमुद केलेल्या तरतुदी प्रमाणे करण्यात येत आहे. प्रत्येकाने आपले प्रश्न शांतपणे व सनदशीर मागाने उपस्थित करावेत व जनसुनावणी शांतपणे पार पाडण्यास सहकार्य करावे असे आवाहन केले. तसेच प्रत्येकाने आपले प्रश्न विचारण्यापुर्वी आपले नाव व पत्ता सांगावा जेणे करून सुनावणीचा इतिवृत्तांत वनविते वेळी सदर बाबी नमुद करण्यात येतील. त्यानंतर त्यांनी मे. टाटा पॉवर कंपनी लिमिटेड यांना प्रस्तावित प्रकल्पाबाबतची माहिती उपस्थितांना देण्यात यावी तसेच त्यांचे प्रश्न व प्रकल्पाबाबत शंका निरसन करावे अशी विनंती केली.

तदनंतर प्रकल्पधारकाच्या वतीने श्री. आनंद गुरव व्यवस्थापक (पर्यावरण) यांनी सदर नियोजित प्रकल्पांबाबत पर्यावरण विषयक केलेला अहवाल खालील प्रमाणे मराठी भाषेत सादर केला. सादरीकरणात प्रामुख्याने प्रकल्पाबाबत खालील बाबी स्पष्ट करण्यात आल्या.

- प्रकल्पाचे विश्लेषण
- हवा, पाणी, जमिन, ध्वनी विस्थापन इत्यादी बाबतीची माहिती.
- नियोजित प्रकल्पामुळे हवा, पाणी विस्थापन, जैवविविधता व वन यावर होणारे परिणाम आणि व्यवस्थापन.
- प्रकल्प चालू झाल्यानंतर केले जाणारे पर्यावरण व्यवस्थापन याबाबतची माहिती.
- इतर पर्यावरण व्यवस्थापनविषयाची माहिती.

या दरम्यान भारतीय जनता पक्षाचे कार्यकर्ते प्रकल्पा विरोधी निदर्शने करीत मंडपात दाखल झाले. मा. डॉ. शिवाजी पाटील अप्पर जिल्हा दंडाधिकारी, तथा जनसुनावणीचे अध्यक्ष यांनी पुन्हा एकदा उपस्थितांना जनसुनावणी विषयक कायदेशीर तरतुदीची माहिती दिली व ही जनसुनावणी शांततापूर्ण पद्धतीने पार पाडण्याचे आवाहन केले. श्री. गुरव यांच्याकडून सादरीकरण झाल्यानंतर मार्क उपस्थितांतील प्रत्येकापर्यंत पोहचवला जाईल व प्रत्येकास आपले मत व्यक्त करण्याची संधी दिली जाईल अशी मा. अध्यक्षांनी ग्वाही दिली.

प्रकल्पधारकाने पर्यावरण विषयीची सविस्तर माहिती दिल्यानंतर सुनावणीचे आयोजक यांनी असे आवाहन केले की यानंतर प्रश्न-उत्तरे घेतले जातील. आपणांस विनंती आहे कि सदर प्रकल्पाबाबत पर्यावरण विषयक प्रश्न विचारावेत व त्याचे समर्पक उत्तर टाटा पॉवर कंपनीच्या अधिकाऱ्यांनी द्यावे. यावेळी मा. अध्यक्षानी पुन्हा एकदा जनसुनावणी विषयक कायदेशीर तरतुदीची माहिती दिली व जनसुनावणी सुरळीत होण्यासंदर्भात शांततेचे आवाहन केले व सभेच्या कामकाजास परवानगी दिली.

१. श्री. राजा चौगुले :

अ.क्र.	चर्चेतील प्रश्न
१.	<p>टाटा कंपनीने दिलेल्या माहिती विषयी वाद नाही. टाटा कंपनीचे नाव हे खूप चांगले आहे. या मुंबई-महाराष्ट्रात उदयोग वाढले पाहिजेत यातही काही वाद नाही. परंतु उदयोग वाढत असताना येथील चेंबूरकर जनता आरोग्याविषयी तडजोड करणार नाही. या प्रकल्पाला विरोध करत असताना मला सांगायचे आहे की जनसुनावणी हे निव्वळ नाटक असते. आजपर्यंत जनसुनावणीच्या विरोधात जाऊन मोठमोठे प्रकल्प उभे राहिलेले आहेत. टाटा उदयोग संपुर्ण जगात नावाजलेला उदयोग आहे. आज जग व देश आधुनिकिकरणाकडे जात असून कोळसा वापरणे हा प्रकार बॅन होत चालला आहे. या म.प्र.नि. मंडळाने मुंबईतील टेक्सटाईल इंडस्ट्रीजला कोळसा वापरण्यास बॅन केला आहे तर टाटा पॉवरला आधुनिकिकरण करून कोळश्यावर वीजनिर्मिती करण्याचा काय अधिकार आहे? आम्ही चेंबूरकर चेंबूरमध्ये नाही तर गॅस चेंबर मध्ये राहातोय. येथे एच.पी.सी.एल., वी.पी.सी.एल., आर.सी.एफ.व इतर इंडस्ट्रीजमुळे तसेच देवनार डॅपिंग ग्राऊंडमुळे एवढ्या प्रमाणात प्रदूषण होतेय की चेंबूरकरांच्या यातना व त्यांच्या उद्रेकांची कुणीही दखल घेतली नाही. मी स्वतः गेल्या २० वर्षांत तीन प्रदूषणकारी कंपन्यांमध्ये काम केलेले आहे. प्रकल्प सादर करताना सगळ्या गुळगुळीत गोष्टी दाखवल्या जातात पण काहीही होत नाही. प्रकल्पातील कोळश्यामधून निघणारे धुलिकण ५ ते १० कि.मी परिसरात पसरणार आहेत. चेंबूरच नव्हे तर घाटकोपर, विक्रोळी या परिसरात धुलिकण पसरणार आहेत. म.प्र.नि. मंडळ कन्सेन्ट तर देते पण इम्प्लिमेंट कोण करणार? प्रकल्पास परवानगी मिळाली की तिकडे कुणी हॅकूनही बघणार नाही. आमचा प्रकल्पास अजिबात विरोध नाही. ग्राहकांना स्वस्त वीजही हवीच पण ६००० मेट्रिक टन कोळसा वापरल्यानंतर निर्माण होणारी राख कुठे ठेवणार व तिची विल्हेवाट कशी करणार याबाबत कंपनीने काहीच सांगितलेले नाही.</p> <p>उदया हे युक्तिवाद करतील ही राख विट भट्टयांना दिली जाईल. मी अश्या चार विट भट्टयांना भेट दिलेली आहे परंतु यापैकी एकही विट भट्टीकडे म.प्र.नि. मंडळची परवानगी नाही. सगळेच सांगतात की घरगुती व औद्योगिक सांडपाण्याचा पुनर्वापर करू. हा प्रश्न फक्त चेंबूर वासियांचा नसून तर संपुर्ण मुंबई वासियांचा आहे आणि याचे दुष्परिणाम खूप मोठे असतील.</p> <p>देवनार डॅपिंग ग्राउंड आणि जैविक कचऱ्याचे प्रश्न आहेतच. प्रकल्प यायला पाहिजे पण माझी एक सुचना आहे टाटा पॉवरला वीज स्वस्तात मिळायला हवी, तुम्ही वीजनिर्मिती केली पाहिजे पण कोळसा वापरणे हा कुठला प्रकार आहे.</p> <p>मी चेंबूरच्या जनतेच्यावतीने सांगू इच्छितो की हे सगळे नाटक आहे. या जनसुनावणीचे काय होणार काय नाही हे शासनाच्या हातात आहे. जनसुनावणी होईल आपण आपल्या घरी जाऊ हा पण प्रकल्प होणार हे ही मी तुम्हाला सांगू इच्छितो. पण आज मी तुम्हाला ही विनंती करतो आहे की हा प्रकल्प करायचा घाट जर टाटा पॉवरने काढला किंवा तो होऊ दिला तर प्रत्येक चेंबूर वासियांचे कर्तव्य आहे की रस्त्यावर उरून हा टाटा पॉवरचा प्रकल्प होऊ द्यायचा नाही एवढे लक्षात ठेवा.</p>

श्री. चौगुले यांच्या वक्तव्यानंतर श्री. देवी गोएंका पर्यावरण तज्ञ हे माईक जवळ बोलण्यासाठी आले असता मा. अध्यक्षानी सांगितले की श्री. चौगुले यांनी मांडलेल्या आक्षेपांवर टाटा कंपनीच्या व्यवस्थापनाने स्पष्टीकरण देणे अपेक्षित आहे व त्यानंतर आपण बोलावे.

मा. अध्यक्षानी प्रकल्प प्रवर्तकांना सांगितले की श्री. चौगुले यांनी मांडलेल्या महत्वांच्या मुद्द्यांवर आपण स्पष्टीकरण द्यावे. प्रकल्पाचे महाव्यवस्थापक श्री. मांजरेकर यांनी स्पष्टीकरणास सुरुवात करताच श्री. चौगुले यांनी आक्षेप घेतला कि आम्हाला टाटा कंपनीच्या व्यवस्थापनाकडून स्पष्टीकरण नको, अथोरटी बॉडी म.प्र.नि. मंडळ आहे. परवानगी म.प्र.नि. मंडळ आणि शासन देणार आहे. तरी आम्हाला टाटा कडून उत्तर नको तर म.प्र.नि. मंडळाच्या अधिकाऱ्यांनी किंवा तहसिलदाराने स्पष्टीकरण द्यावे.

यावर मा. अध्यक्षानी पुन्हा एकदा स्पष्ट केले की जनसुनावणीत आपले मत नोंदविले जाते तसेच प्रकल्पाच्या प्रवर्तकाकडून त्याचे स्पष्टीकरण दिले जाते. या सर्वांचे छायाचित्रीकरण होते व त्याचे इतिवृत्त बनविले जाते. उपस्थितांनी एकत्रित आग्रह धरला की स्पष्टीकरण म.प्र.नि. मंडळाच्या अधिकाऱ्यांकडूनच देण्यात यावे त्यावेळी उपस्थितांपैकी समोरील चार-पाच व्यक्तींनी याबाबत पुन्हा-पुन्हा आग्रह धरला.

हा गोंधळ चालू असतना मा. अध्यक्षानी पुन्हा एकदा सांगितले की आपले म्हणणे येथे नोंदविले जाणार आहे. शासनाने जे बंधन व कायदे घालून दिलेले आहेत त्याबाहेर मला किंवा इतर कुणालाही जाता येणार नाही. या ठिकाणी कायदयामध्ये जी प्रकिया दिली आहे ती पार पाडावी लागणार आहे. पुन्हा एकदा उपस्थितांनी स्पष्टीकरणाच्या मुद्द्यावरून गोंधळ चालू केला. पुन्हा मा. अध्यक्ष जनसुनावणीच्या कार्यपद्धतीची महिती देऊ लागले असता, उपस्थितांपैकी दहा-पंधरा व्यक्तींनी माईकजवळ येऊन माईकवर बोलण्यास व गोंधळाला सुरुवात केली व टाटा प्रतिनिधींना बोलण्यासाठी येऊ दिले नाही.

२. श्री. सुबोध आचार्य :

अ.क्र.	चर्चेतील प्रश्न
१.	या जनसुनावणीला प्रॉपर रिप्रेझेंटेशन आहे का? महापालिकेचे प्रतिनिधी कुठे आहेत? ज्येष्ठ नागरीक कुठे आहेत? अन्यथा ही जनसुनावणी बरखास्त करा.

३. एक स्त्री प्रतिनिधी (नाव सांगितले नाही) :

अ.क्र.	चर्चेतील प्रश्न
१.	या गोंधळाच्या मधेच माईकचा तावा घेऊन आपले म्हणणे मांडण्यास सुरुवात केलीः टाटा कन्सल्टिंग इंजिनियर्स (टि.सी.ई) ही संस्था टाटा सन्स च्या मालकीची आहे या घरच्याच कंपनीच्या कन्सल्टिंगनुसार तुम्ही हा प्रकल्प कसा मान्य करता? लोकमत नाही, एन.जी.ओ नां विचारात घेतलेल नाही. त्यातील ड्रॉव्क्स लक्षात घेतलेले नाही. कोळसा हा हानिकारकच आहे. मुंबईत असणारी वीजेची तफावत भरून काढण्यासाठी शहापूरमधून वीज का घेतली जात नाही? डहाणूचा भाग निव्वळ चिकूच्या उत्पादनापोटी इकोसेन्सिटीव्ह गाव म्हणून मानला जातो, तर मुंबईतील लोकांचा विचार का केला जात नाही?

या दरम्यान माईक जवळ उपस्थितांची गर्दी वाढतच होती. गोंधळ चालू असताना मा. अध्यक्षानी शांतता पाळा, सर्वांनी वसून घ्या, एका वेळेस एकानेच आपले म्हणणे मांडा व टाटाच्या प्रतिनिधींना त्यांचे स्पष्टीकरण मांडू द्या अशा सूचना वारंवार केल्या. तरी सुद्धा उपस्थितांचा गोंधळ वाढतच होता आणि उपस्थितांनी घोषणावाजी, नारेवाजी, तक्रारी याबाबत मोठ्या आवाजात बोलणे चालू ठेवले व गोंधळ सुरुच ठेवला.

४. मा. आमदार श्री. चंद्रकांत हंडोरे :

अ.क्र.	चर्चेतील प्रश्न
१.	सध्याच्या १५७० मेगा वॉट पैकी सुमारे ७०० ते ८०० मेगा वॉट वीज ही आधी पासूनच कोळश्यावर निर्माण केली जाते व ६६० मेगा वॉट ही तेल व गॅसवर निर्माण केली जाते. तेल व गॅसच्या किंमती वाढल्या आहेत, त्यामुळे कोळश्यावर वीजनिर्मिती करायची आहे असे टाटा कंपनीचे म्हणणे आहे. टाटा कंपनी जुनी असून, देशातील अग्रगण्य संस्था आहे याविषयी दुमत नाही. या देशाच्या विकासामध्ये टाटाचा मोठा हिस्सा आहे. आमचे म्हणणे असे आहे की चेंबूरमध्ये एच.पी.सी.एल., बी.पी.सी.एल., आर.सी.एफ. टाटा अश्या

<p>मोटमोटया कंपनी आहेत. चेंबूरचे प्रदूषण हे प्रदूषण रेश्योनसुसार ८० पॉईंट पर्यंत असायला हवे पण ते १८०-१६०-१२० या पातळी पर्यंत वाढलेले आहे. आजचेच प्रदूषण जेवढे असायला हवे त्याच्या दुप्पट आहे त्यात पुन्हा तुम्ही लाखो टन कोळसा आयात केल्यामुळे केवढे भयानक प्रदूषण होऊ शकते? सध्या ७०० ते ८०० मेगा वॉट इतकी वीज ही आधीच कोळश्यावर निर्माण करता आहात त्यामुळे चेंबूरकरांच्या आरोग्यावर होणाऱ्या परिणामांसाठी तुम्ही काय करत आहात याविषयी माहिती सांगत नाही. आमचा वीजनिर्मितीला विरोध नाही. मुंबई, महाराष्ट्र, देशात पॉवर शॉर्टेज आहे हे आम्ही समजू शकतो. चेंबूरचा विकास होत असताना त्या विकासात टाटा पॉवरचा किती हिस्सा आहे? आम्ही तुमचे अभिनंदन करतो की माहुल गावातील लोकांना तुम्ही मदत करता. टाटा जे गरम पाणी माहूल सभोवतालच्या खाडीत सोडते, त्यामुळे तेथील सर्व मासे मरून पडलेले आहेत. माहूलकरांचा मच्छीमारी व्यवसाय डबघाईला आलेला आहे. आर.सी.एफ., बी.पी.सी.एल.च्या ट्रक्स व कंटेनर्स वाहतुकीमुळे होणाऱ्या प्रदूषणाचा विचार कंपनीने व म.प्र.नि. मंडळाने व उपनगर कलेक्टरने केला आहे का? यावर काही उपाय केले आहेत का? सर्वप्रथम सध्याच्या ८०० मेगा वॉट साठीच्या कोळश्यामुळे होणाऱ्या प्रदूषण नियंत्रणासाठी टाटा कंपनी काय करते आहे? या प्रकल्पाच्या इ.आय.ए साठी टाटा कंपनीची टि.सी.ई ही टाटा ग्रुपचीच कंपनी आहे? मुंबईपासून दुर असणाऱ्या नीरी तसेच देशातील इतर नामांकित कंपनीकडून इ.आय.ए रिपोर्ट का वनवण्यात आला नाही? टाटा कंपनी हल्लीपर्यंत रिलायन्स कंपनीला ५०० मेगा वॉट वीज देत होती ती आता काढून घेऊन मोटमोठी कॉर्पोरेट ऑफीसेस, मल्टीप्लेक्सेस, मॉल्स व उदयोगांना पोचवली जाते. टाटाची वीज जर स्वस्त आहे तर ती मध्यमवर्गीयांना, झोपडपट्टीतील गरीब रहिवाशांना का मिळत नाही? या संबंधामध्ये आपण सर्वांनी एकत्र येऊन टोस निर्णय घेऊया वेळप्रसंगी मोर्चा बंद रस्त्यावर उतरायची तयारी ठेऊ व चेंबूरचे प्रदूषण थांबवू.</p>

मा.श्री.हंडोरेंच्या भाषणानंतर जनसमुदायातूनच श्री.राजा चौगुले यांनी टिप्पणी केली की "मा.श्री.हंडोरें साहेब आपण हे आश्वासन द्या की कुठल्याही परिस्थितीत टाटाचा हा प्रकल्प होऊ देणार नाही अशी आपण घोषणा करा" संपुर्ण चेंबूरची जनता आपल्या पाठीशी उभी राहिल.

मा.अध्यक्षांनी "कृपया समोर असलेल्या माईकचा वापर करून आपापले म्हणणे मांडावे" अशी विनंती केली. या दरम्यान पर्यावरण तज्ञ श्री.देवी गोएंका आणि श्री.रविंद्र पवार माईक जवळ आले. मा.अध्यक्षांनी उपस्थितांनी सांगितले की श्री.देवी गोएंका हे पर्यावरण तज्ञ असून मुंबईतील पर्यावरण संबंधित प्रश्नांवर आपले मत मांडत आले आहेत तरीही त्यांना बोलण्याची संधी द्या परंतु लोकांचा गोंधळ काही थांबत नव्हता. या दरम्यान श्री.रविंद्र पवार यांनी आपले मत मांडण्यास सुरुवात केली.

५. श्री.रविंद्र पवार :

अ.क्र.	चर्चेतील प्रश्न
१.	<p>ही जनसुनावणी चेंबूरकरांच्या दृष्टीने अत्यंत संवेदनशील आहे. माझा पहिला आक्षेप असा आहे की या जनसुनावणीसाठी करण्यात आलेले व्यवस्था ठीक नाही. कोळसा हा अत्यंत घातक उर्जा स्रोत आहे. जरी तो आयात केला जाईल असे सांगण्यात आले तरी त्याचे परिणाम घातकच असणार आहेत व आपण ते कमी करू शकत नाही. या कोळशातून अनिष्ट व मानवी आरोग्यास अपायकारक असे सल्फर डायऑक्साईड व ऑक्साईड्स ऑफ नायट्रोजन निर्माण होतात. कोळश्यापासून वीजनिर्मितीसाठी प्रचंड प्रमाणात पाणी लागते. ५०० मेगा वॉट साठी २.५ बिलियन गॅलन पाणी लागणार आहे. जे पाणी समुद्रातून उपसण्याच्या त्या दरम्यान किती माशांची अंडी, लारवा पाण्यातून नष्ट होतात याचा पर्यावरण दृष्टीकोनातून अभ्यास केला आहे का? वेगवेगळ्या ठिकाणांचा काही अभ्यासांनुसार साधारणपणे १८ ते २० लाख माशांचे नुकसान वर्षभरात होते असे आढळून आलेले आहे. प्रकल्पातून बाहेर सोडण्यात येणाऱ्या पाण्याचा समुद्रावर होणाऱ्या दुष्परिणामांचा पर्यावरण दृष्टीकोनातून अभ्यास झाला आहे का? टि.सी.ई ऐवजी दुसऱ्या नामांकित पर्यावरण संस्थेकडून इ.आय.ए झाल्यास चांगले होईल. चेंबूर परिसराचा एअर क्वालिटी इन्डेक्स नेमका किती आहे याविषयी काहीही सांगण्यात आलेले नाही. हंडोरे साहेबांनी सांगितल्याप्रमाणे २०० च्या जवळपासचा एअर क्वालिटी इन्डेक्स हा अनहेल्दी असा शास्त्रीय दृष्टीकोनातून स्वीकारला जातो. त्याला रेड झोन समजले जाते त्याविषयीचे निराकरण करणे</p>

<p>आवश्यक होते पण केलेले नाही. श्री. चौगुले यांनी सांगितल्या प्रमाणे चेंबूर परिसरात धुलीकणांमुळे होणारे रोग जसे डोळे चुरचुरणे, छातीत दुखणे, कफ, मोठ्या प्रमाणावर होणारे श्वसनात अडथळे निर्माण होणे हे कॉमन झाले आहे व नर्सिंग होम व डॉक्टर्सची संख्या प्रचंड वाढलेली आहे. हे धुलीकण ज्यांना टि.एस.पी असे म्हणतात हे अतिशय सुक्ष्म असतात, डोळ्यांना दिसत नाही, हवेत पसरलेले असतात. त्यात सिलीकॉन डायऑक्साईड, अॅल्युमिनीयम, मॅग्नेशियम, आयर्न, कॅल्शियम, टिटॅनियम, पोटॅशियम, आर्सेनिक, मरक्युरी, सोडीयम, सल्फर व कमी प्रमाणात युरॅनियम व थोरियम असे वेगवेगळे घटक असतात. या घटकांमुळे आरोग्यावर हानीकारक परिणाम होतात जे चेंबूरमधील जनतेत खूप प्रमाणात आहेत. चेंबूरमध्ये मोठ्या प्रमाणात प्रदूषण असताना, याठिकाणी पुन्हा कोळश्यावरचाच प्रकल्प का? टाटाला व वीजेला आमचा विरोध नाही. टाटा हे नाव अत्यंत विश्वसनीय नाव आहे. त्याविषयी काहीही म्हणणे नाही. कोळश्यावरील वीजनिर्मितीस अमेरिकेसारख्या प्रगत राष्ट्रांचाही विरोध आहे. असे असताना येथे जनतेच्या जीवाशी खेळून, मुडदे पाडून जर कोळश्यावरील वीजनिर्मिती करणार असाल तर चेंबूरच्या जनतेचा त्यास विरोध असेल.</p>
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यानंतर मा. अध्यक्षांनी असेही सांगितले की सर्व वक्त्यांचे मुद्दयांची व आक्षेपांची नोंद घेण्यात येत आहे व त्यानुसार आत्तापर्यंत झालेल्या सर्व वक्त्यांच्या भाषणातील ठळक मुद्दे व आक्षेपांची या ठिकाणी नोंद केलेली आहे. जनसुनावणीच्या प्रक्रियेचा भाग म्हणून वक्त्यांच्या आक्षेपांना उत्तर देणे हे प्रकल्प अधिकार्यांकडून अपेक्षित असते. मा. अध्यक्षांनी असेही सूचविले की टाटा कंपनीच्या अधिकार्यांनी सर्व आक्षेप, प्रश्नांची नोंद करावी व सर्वांचे एकत्रित स्पष्टीकरण द्यावे. परंतु उपस्थितांनी आग्रह धरून टाटाच्या अधिकार्यांना स्पष्टीकरण देण्यापासून लांब ठेऊन म.प्र.नि. मंडळाच्या अधिकार्यांनीच स्पष्टीकरण द्यावे असा आग्रह धरला व टाटाच्या प्रतिनिधींना उत्तरे देण्यापासून मज्जाव केला.

यानंतर पर्यावरण तज्ञ श्री. देवी गोएंका हे माईकजवळ बोलण्यासाठी आले असता माईकजवळ उभ्या असलेल्या उपस्थितांनी पुन्हा गोंधळ करण्यास सुरुवात केली व यातील काही जणांनी असा आग्रह धरला की मा. हंडेरें साहेबांनी जे सांगितले ते संपुर्ण चेंबूरची जनता मान्य करते व हि जनसुनावणी इथेच बरखास्त करा व तुम्ही आम्हा सर्व जनतेची नोंद घ्या. या गोंधळामध्येच श्री. गोएंका यांनी बोलणे सुरु केले असता जमावाने त्यांना बोलू दिले नाही व ते चेंबूरचे रहिवासी नाहीत त्यामुळे त्यांना त्यांचे मत मांडण्याचा अधिकार नाही अशी घोषणा काही जणांनी केली. सदर गोंधळ पाहता मा. अध्यक्षांनी माईकजवळ गर्दी न करता जागेवर बसण्याची व शांतता राखण्याची वारंवार विनंती केली.

६. सौ. सीमा माहूलकर, माहूल गाव :

अ.क्र.	चर्चेतील प्रश्न
१.	<p>सध्या वापरण्यात येणाऱ्या कोळश्यामुळेच या भागात प्रदूषण आहे. या व्यतिरिक्त टाटा कंपनीने आणखी कोळसा वापरून ५०० मेगा वॉट वीजनिर्मितीचे जे धोरण आखले आहे त्यातून आणखी जास्त प्रदूषण होणार आहे. सध्या कारखान्याच्या परिसरातील माहूल, गव्हाणपाडा, अंबापाडा, ट्रॉम्बे, मंडाळा, मानखुर्द या गावातील जनतेच्या शरीरावर प्रदूषणाचा जास्त परिणाम होत आहेत. आत्ता दिलेल्या माहितीनुसार सौंदर्य प्रसाधने व मुलांना डायव्हिंग शिकवणे असे काही प्रकल्प टाटा कंपनी माहूल गावात राबवते. पण शरीरावरील दुष्परिणामांवरील उपचारांविषयी काही कार्यक्रम करित नाहीत. दमा कॅन्सर अशा गंभीर आजारांवरील उपचारांसाठी टाटा कंपनीने एखादे हॉस्पिटल बांधून कमी दरात वा मोफत वार्षिक तपासणी करावी. प्रकल्प तर चालू रहाणारच आहे पण आपण एकत्रित येऊन आपल्यासाठी काहीतरी साध्य करून घेऊया. विरोध करायचा असेल तर पुर्ण प्रकल्प बंद करण्यासाठी विरोध करा.</p>

या दरम्यान सुद्धा माईकजवळ जमावाची गर्दी ही कायम होती व गोंधळ सुरुच होता. या दरम्यान एका स्त्री प्रतिनिधीने नाव न सांगता माईकचा ताबा घेऊन असे विचारले की, आता पर्यंत यांनी कुठले आरोग्य शिविर घेतले आहेत का? आणि आताच्या एवढ्या प्रदूषणामुळे अस्थमा या रोगावर औषधांचा सुद्धा परिणाम होत नाही. यापेक्षा तुम्ही कोळसा वापरणारच नाही याची हमी सर्वांनी घ्यावी. या दरम्यान जमावाचा गोंधळ चालू होता. मा. अध्यक्षांनी व्यासपीठाजवळील जमावाला वारंवार शांतता राखण्याचे आवाहन केले आणि आपापल्या जागी बसण्याची विनंती केली.

७ . श्रीमती . सुप्रदा प्रकाश फातर्फेकर :

अ.क्र.	चर्चेतील प्रश्न
१.	मी आपल्याला सांगू इच्छिते की चेंबूर हे भारतात सर्वाधिक प्रदूषित शहर म्हणून ४६ व्या क्रमांकावर आणि मुंबईत पहिल्या क्रमांकावर आहे. तुम्ही विचार करा की इथे आर.सी.एफ. आहे, एच.पी.सी.एल.आहे, बी.पी.सी.एल.आहे, देवनार डंपिंग ग्राऊंड आहे बी.ए.आर.सी यासारख्या कंपन्या आहेत. तुम्ही मला सांगा इथे किती प्रदूषण करणार आहोत. जर इथे काही आपली आली तर आपण डोळे मिचकायच्या आत हवेत असणार आहोत. इथे आपल्याल दुसरी फॅक्टरी, हॉस्पिटल वगैरे काही नको. माहूल गाव, अंबापाडा इथे असणाऱ्या प्रदूषणाविषयी म.प्र.नि. मंडळाने काय केले आहे? एच.पी.सी.एल., बी.पी.सी.एल., आर.सी.एफ., एजिस या कंपन्यामुळे होणाऱ्या प्रदूषणाविषयी म.प्र.नि. मंडळाने काय केले आहे? तुम्ही कंपन्यांच्या वाजूने आहात की सामान्य नागरिकांच्या वाजूने आहात हे स्पष्ट करा. इथे असणारे सध्याचे प्रदूषण आधी थांबवा. उलटी येणे, चक्कर येणे ह्या जुन्या गोष्टी आहेत इथे आता महिलांची मिसकॅरेजेस होत आहेत. त्याला कोण जबाबदार आहे? आम्हाला इथे कुठलाही प्रकल्प नको आहे.

८ . श्रीमती . फुलाबाई सोनावणे :

अ.क्र.	चर्चेतील प्रश्न
१.	मी इथे ४० वर्षापासून रहात आहे. आपण प्रदूषण ओकणाऱ्या कंपन्यांचा निषेध करूया. प्रदूषणामुळे जो माणूस ५० वर्षे जगणार तो ४० व्या वर्षीच मरतो.

या दरम्यान सुद्धा माईकजवळ जमावाची गर्दी ही कायम होती व गोंधळ सुरुच होता. मा. अध्यक्षांनी पुन्हा एकदा व्यासपीठाजवळील गर्दी करणाऱ्या लोकांना शांततेत राहून एका पाटोपाठ एक असे आपले मत मांडण्याची विनंती केली.

९ . अॅडव्होकेट श्रीमती . नैना परदेशी :

अ.क्र.	चर्चेतील प्रश्न
१.	सर्वात प्रथम मला माझे म्हणणे मांडायचे आहे की म.प्र.नि. मंडळाकडून असे वारंवार सांगण्यात येत आहे की टाटाला उत्तरे द्यायला अवधी द्या. माझे म्हणणे असे आहे की हे पूर्णपणे चुकिचे आहे. कारण त्यांनी त्यांचा प्रोजेक्ट मांडल्यानंतर आमची जनसुनावणी घेतली गेली आहे त्याच्यामुळे हि जनसुनावणी आमचे म्हणणे ऐकून घेण्यासाठी आहे. त्यांचा रिपोर्ट वाचल्यानंतर आम्ही आमचे म्हणणे मांडण्यासाठी इथे तुमच्यासमोर आलो आहोत. दुसरा मुद्दा असा कि टाटा इन्स्टिट्यूटने केलेल्या रिसर्च विषयी इथे वारंवार सांगण्यात आलेले आहे. हे नैसर्गिक न्यायतत्वाच्या पूर्ण विरुद्ध आहे. कारण जी संस्था टाटाची एक भागधारक संस्था आहे तिच जर रिपोर्ट बनविणार असेल तर हा रिपोर्ट कधीही इमपार्शियल असू शकत नाही. त्याच्यामुळे हा रिपोर्ट वाजूला ठेवणे अतिशय गरजेचे आहे. मी दोनच मुद्दे इथे मांडते की त्यांनी वारंवार इथे सांगितले आहे की ग्राहकांच्या सोयीसाठी हा प्रकल्प करत आहोत. हे पूर्णपणे चुकिचे आहे. कारण त्यांच्या या पुर्ण रिपोर्टमध्ये कुठेही आतापर्यंत ग्राहकांना कोणत्या दराने वीज दिली जात होती आणि नंतर काय सवलत मिळणार याचा उल्लेख नाही. राख वापरण्याविषयीच्या गाइडलाईन्स आधीच Ministry of Affairs ने दिलेल्या आहेत. सल्फर डायऑक्साईडचे प्रमाण कमी करण्यासाठी जो प्लान्ट ऑपरेट करायला लागतो त्याची किंमत काही कोटींच्या घरामध्ये आहे जी त्यांनी अजिवात केलेली नाही. फक्त टाटांनी तुमच्या आमच्या सोयीसाठी सांगितले आहे की आम्ही समुद्राचे पाणी वापरून आम्ही हा प्रोजेक्ट करू जे प्रत्यक्षात शक्य नाही. या पद्धतीने कोळसा धूवून सल्फर डायऑक्साईडचे प्रमाण कमी करण्यासाठी जी प्रोसेस करणार त्याचे पाणी कुठे जाणार याचा उल्लेख नाही. दुसरी गोष्ट म्हणजे राखेचा वापर आम्ही विटा बांधण्यासाठी आणि सिमेंट कॉक्रीटमध्ये मिस करू असे टाटांचे म्हणणे आहे. या प्रकारचा कुठला प्रोजेक्ट जवळपासच्या परिसरात आहे? ही राख कुठे नेली जाणार? ही राख जेव्हा सांडते तेव्हा त्याचे परिणाम काय होणार? विटा बांधण्यासाठी आणि सिमेंट उत्पादकांबरोबर त्यांच्या काही मिटींग झाल्या आहेत का? असा कोणताही उल्लेख या प्रोजेक्टमध्ये नाही. या दोन गोष्टींमुळे हा या प्रोजेक्ट पूर्णपणे वाजूला सारायला हवा.

मा. अध्यक्षानी पुन्हा एकदा शांतता पाळण्याचे आवाहन केले. तसेच वर उपस्थित केलेले मुद्द्यांची नोंद करून घेण्यात येत आहे याची महिती दिली. पर्यावरण तज्ञ श्री. देवी गोएंका हे जरी चेंबूरच्या बाहेरचे असले तरी पर्यावरण तज्ञ आहेत व त्यांना आपली वाजू मांडण्याची संधी द्यावी असे अध्यक्षानी सांगितले. परंतु उपस्थित लोकांनी श्री. देवी गोएंका यांना बोलण्यासाठी माईकजवळ येऊ दिले नाही.

१०. श्री. विठ्ठल खरटमोल :

अ.क्र.	चर्चेतील प्रश्न
१.	भाजपाचा कोळश्याच्या प्रकल्पाला तीव्र विरोध आहे. टाटामध्ये गेल्या १० वर्षांपासून सुरु असलेल्या कोळश्यापासून वीजनिर्मितीमुळे धुलिकण गव्हाणपाडा परिसरात गेल्या ५ ते ६ वर्षांपूर्वी पसरलेले होते व लोकांमध्ये घबराट निर्माण झाली होती. त्यानंतर टाटांच्या अधिकाराऱ्यांशी बोलल्यानंतर आता हळूहळू धुलिकणांचे प्रमाण कमी झाले. आता परत ५०० मेगा वॅटच्या निर्मितीसाठी कोळश्याचा वापर करणार त्यामुळे चेंबूरमध्ये राहाणाऱ्या लोकांचे जीवन फार कठीण होणार आहे. आता मेडीकलचा रिपोर्ट असा आहे कि चेंबूर, ट्रॉम्बे, अणुशक्ती नगर या परिसरात जी लहान बालके आहेत त्यापैकी ७०% मुलांना अस्थमा आहे, टिबी आहे, आणि त्वचेचे रोग आहेत. टाटांनी आतापर्यंत या लोकांसाठी काहीही केले नाही. त्यामुळे या प्रकल्पाचा आम्ही विरोध करत आहोत. आम्हाला असे वाटते की टाटांनी कोळश्याचा वापर न करता तेल किंवा नैसर्गिक वायू वापरून वीजनिर्मिती करावी. टाटाबद्दल आमच्या पक्षामध्ये किंवा लोकांमध्ये सहानुभूती आहे. टाटा कंपनी निःस्वार्थ कंपनी आहे. परंतु या प्रोजेक्टमुळे चेंबूरचा नाश होणार आहे त्यामुळे याला आमचा पूर्ण विरोध आहे.

या दरम्यान सुद्धा माईकजवळ जमावाची गर्दी ही कायम होती व गोंधळ हा वाढतच होता.

११. श्री. गौतम सोनावणे :

अ.क्र.	चर्चेतील प्रश्न
१.	मी रिपब्लिकन पार्टी ऑफ इंडियाच्या वतीने या कोळश्यावरील प्रकल्पाचा विरोध करण्यासाठी इथे आलेलो आहे. रिपब्लिकन पार्टी ऑफ इंडिया टाटा कंपनीचा सतत आदर करत आलेला आहे. टाटाने या भारत देशात औद्योगिक क्रांती करून निश्चितपणे गोरगरीबांना आणि दलिताना नोकऱ्या देऊन समान न्याय दिलेला आहे. त्यांच्या वीजनिर्मितीसाठी आमचा पूर्णपणे पाठिंबा आहे. महाराष्ट्रात वीजेचा तुटवडा आहे परंतु चेंबूर आणि ट्रॉम्बेमध्ये अगोदरच रिफायनरीज, खत कारखान्यांमुळे खूप प्रदूषण आहे. तिकडे गोवंडी परिसरात डंपिंगमुळे प्रदूषण आहे. या प्रदूषणग्रस्त भागामध्ये आणखी प्रदूषण वाढवून या चेंबूरकर आणि ट्रॉम्बेच्या नागरिकांना मरण आणू नये किंवा मरणापर्यंत नेऊ नये किंवा भोपाळची पुनरावृत्ती करू नये इतकी विनंती म.प्र.नि. मंडळाच्या सर्व सभासदांना रिपब्लिकन पार्टी ऑफ इंडियाच्या वतीने करतो.

मा. अध्यक्षानी उपस्थित लोकांना गोंधळ करू नये व टाटांच्या प्रतिनिधींना उत्तर देऊ द्यावे व इतरजणांना बोलायचे असल्यामुळे आपले मुद्दे दोन-दोन मिनिटांमध्ये मांडण्याचे आवाहन केले.

१२. श्री. प्रमोद वसंत शिंदे :

अ.क्र.	चर्चेतील प्रश्न
१.	या प्रकल्पाला आक्षेप नोंदविण्यासाठी शिवसेनेचा प्रतिनिधी म्हणून मी इथे आलेलो आहे. टि.सी.ई ही टाटा सन्सची कंपनी असल्यामुळे त्यांनी बनविलेल्या अहवालावर म.प्र.नि. मंडळ कसा विश्वास ठेवणार आहे? दुसरा प्रश्न म.प्र.नि. मंडळाने टि.सी.ई चा अहवाल तसाच तसा न स्वीकारता त्यांच्या अभ्यासप्रक्रियेचे अवलोकन करून त्यांनी पर्यावरणासंबंधी जे घेतलेले मोजमाप आहे ते वर्षातील कोणत्या दिवशी आणि कोणत्या वेळेत घेतले आहे याची तपासणी करावी. तसेच याबद्दल कोणत्याही बाबी अहवालात नमुद केलेल्या नाहीत. म्हणून म.प्र.नि. मंडळाने टि.सी.ई चा हा अहवाल फेटाळून लावावा. मी इथे म.प्र.नि. मंडळाला सुचवू इच्छितो की एका स्वतंत्र यंत्रणेमार्फत जिचा टाटा समूहाशी काही संबंध नाही अशा संस्थेला अहवाल बनविण्याची संधी द्यावी. अवलोकनानंतर म.प्र.नि. मंडळाने आधुनिकीकरणामुळे होणारे जे काही परिणाम आहेत ते जाहीर करायला हवेत. मी असे नमुद करतो कि आधुनिकीकरण मुंबई वीजनिर्मितीत भर टाकेल आणि मागणी व निर्मिती यातील तफावत भरून काढण्यास मदत होईल. परंतु टाटा पॉवर कंपनीला असा प्रश्न विचारावासा वाटतो

<p>एवढ्या की मध्य आणि दाट लोकवस्तीत आपल्याला खरचं आधुनिकीकरणची गरज आहे का? आणि मुंबईत जी वीज तफावत आहे ती वाहेरून वीज खरेदी करून भरून काढू शकत नाही का?</p> <p>डहाणू हा चिकूच्या संवर्धनासाठी इकोसेन्सिटीव्ह घोषित केला आहे त्याच प्रमाणे चेंबूरही दाट लोकवस्ती असल्यामुळे इकोसेन्सिटीव्ह घोषित करावा . टाटा पॉवर कंपनी हा प्रोजेक्ट राबविताना निर्माण होणारी वीज खरचं मुंबईच्या लोकांना देणार आहे का? असे लेखी लिहून देणार आहे का? यावद्दलची ग्वाही दिली पाहिजे . माझी टाटा पॉवरला विनंती आहे कि सौर व वायूवर आधारीत प्रदूषणविरहित वीजनिर्मिती प्रकल्प आणावेत .</p>
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या दरम्यान सुद्धा माईकजवळ जमावाची गर्दी ही कायम होती . मा . अध्यक्षानी सर्व उपस्थितांना व्यासपीठाजवळील गर्दी कमी करून जागेवर बसण्याचे आणि शांततेत आपले म्हणणे मांडण्याचे वारंवार आवाहन केले . तरी सुद्धा व्यासपीठाजवळील गर्दी काही कमी झाली नाही .

१३ . श्री . विज्ञान डावरे - अँडव्होकेट, वाशी नाका, चेंबूर :

अ.क्र.	चर्चेतील प्रश्न
१ .	मी जन्मापासून ४० वर्षे वाशी नाका परिसरात रहातो आहे . संपूर्ण जगात कोळश्यावर चालणारे प्रकल्प बंद करण्याची प्रक्रिया चालू आहे कारण ग्लोबल वार्मिंगचा परिणाम संपूर्ण जगावर व पृथ्वीतलावावर होत आहे . पंतप्रधानांनी लोकसभेत पास केलेल्या प्रमाणे दिलेल्या गाइडलाईन म.प्र.नि. मंडळ का वापरत नाही? कोळश्यावरच्या थर्मल पावर प्लान्टला परवानगी दिली जाते हे देशाच्या धोरणाच्या विरुद्ध आहे . राखेची विल्हेवाट लावण्यासाठी उच्च न्यायालय तसेच भारत सरकार यांनी दिलेल्या कोणत्याही सूचनांचे पालन या ठिकाणी होत नाही . आयात करण्यात येणारा कोळसा भारतीय कोळश्यापेक्षा अत्यंत ज्वलनशील असून कोळश्यामध्ये अत्यंत ज्वलनशील असे सल्फर डायऑक्साईडचे, नायट्रोजन ऑक्साईड, हायड्रोजन क्लोराईड, हायड्रोजन फ्लोराईड, हायड्रोक्लोरिक अॅसिड, आरसेनिक, कॅडमियम, क्रोमियम, मरक्युरी, राखेचे धूलीकण, कोळश्याचे धूलीकण तसेच राखेच्या चिखलाचे धूलीकण असतात . समुद्राद्वारे करण्यात येणाऱ्या कोळश्याच्या वाहतूकीमुळे कोळसा समुद्रात पडून प्रदूषण होण्याची शक्यता आहे . त्यामुळे शेकडो कि.मी. पर्यंत कोळी बांधव मासेमारी करू शकणार नाहीत .

या दरम्यान उपस्थितांना पुन्हा एकदा जोरदार गोंधळ करण्यास सुरुवात केली आणि जनसुनावणी बंद करा अश्या घोषणा देण्यास सुरुवात करून श्री . डावरे यांच्याकडून जमावाने माईक ओढून घेतला . मा . अध्यक्षानी उपस्थितांना गोंधळ करू नका व सगळ्यांना आपापले म्हणणे मांडू द्या असे आवाहन केले .

१४ . श्री . राजेंद्र माहूलकर, माहूल गाव :

अ.क्र.	चर्चेतील प्रश्न
१ .	टाटा पॉवरचा ७५० मेगा वॅटच्या कोळश्यावरचा वीजनिर्मिती प्रकल्प आधी पासूनच सुरु आहे . माझी सर्वांना विनंती आहे कि सत्य परिस्थिती समजून घ्यावी . म.प्र.नि.मंडळाला अशी विनंती आहे कि लोकांच्या हितासाठी तसेच आरोग्य जपण्यासाठी काही ठोस उपाययोजना करावी . विरोध करायचा असेल तर पुर्ण प्रकल्प बंद करण्यासाठी विरोध करा .

श्री . राजेंद्र माहूलकर बोलत असताना तेथे उपस्थित असलेल्या इतर पक्षांच्या कार्यकर्त्यांनी पर्यावरण व्यतिरिक्त इतर विषयावर आपआपसात आरोप प्रत्यारोप करण्यास सुरुवात केली . हे पाहून मा . अध्यक्षानी मध्यस्ती करून असे आवाहन केले की हि जनसुनावणी पर्यावरण विषयक असल्यामुळे पर्यावरणा व्यतिरिक्त इतर कुठल्याही मुद्दयावर चर्चा करू नये . तरी सुद्धा उपस्थितांमध्ये व्यासपीठाजवळ गोंधळ चालूच होता व तो वाढताच होता .

१५. श्री. अनिल पाटणकर :

अ.क्र.	चर्चेतील प्रश्न
१.	मी या ठिकाणी माझे एवढेच म्हणणे मांडेण, की येथे म.प्र.नि. मंडळाची व टाटा पॉवरचे लोक आहेत तसेच सर्व पक्षांचे नेते आहेत, इथे कोणत्याही प्रकारचे राजकारण करू नका. या प्रोजेक्टला तुम्हाला खरोखरच विरोध करायचा असेल तर इथे कोणतेही प्रकारचे राजकारण करू नका. हा लढा चेंबूरचा आहे व सर्वांनी चेंबूरकर म्हणून हा लढा लढायचा आहे. त्यासाठी मी नगरसेवक म्हणून सांगतो की या चेंबूरच्या लढयात जर पद आमच पणाला लागल तर मी मा. आमदार श्री. चंद्रकांत हंडोरेंच्या माध्यमातून ठामपणे उभे राहू.

या नंतरसुद्धा व्यासपीठाजवळ जमलेल्या लोकांचा गोंधळ सुरुच होता. गोंधळ सुरु असताना मा. अध्यक्षानी सांगितले की अश्या प्रकारे गोंधळ केल्याने कोणाचेही म्हणणे कोणालाही ऐकू येणार नाही व माईक बंद करण्याविषयीच्या सुचना दिल्या. तसेच मा. अध्यक्षानी असे सांगितले की गोंधळ करून आपले म्हणणे मांडणे ही काही योग्य पद्धत नाही. आपण गोंधळ केला तर आपले म्हणणे ऐकून घेतले जाणार नाही व शांतता राखण्याचे व बसून घेण्याचे आवाहन केले. मा. अध्यक्षानी मा. आमदार श्री. हंडोरे यांना व श्री. कोरगावकर यांना आपापल्या कार्यकर्त्यांना बसून घ्यावे अशा सूचना देण्याचे आवाहन केले. तदनंतर सुद्धा व्यासपीठाजवळील लोकांचा जमाव व गोंधळ कायम राहिला.

१६. श्रीमती. राजश्री पालांडे:

अ.क्र.	चर्चेतील प्रश्न
२.	म.प्र.नि. मंडळाद्वारे जी जनसुनावणी आयोजित केली आहे हे निव्वळ नाटक आहे. आमच्या मतांची अंमलबजावणी सरकार करणार आहे का? अश्या जनसुनावण्या होतात मते मांडली जातात, मते ऐकली जातात पण त्याच्यावर कधीही निर्णय न होता लोकांची दिशाभूल केली जाते. आपण इथे आपसात भांडण न करता हे प्रदूषण कसे थांबविता येईल व हा कोळश्याचा प्रकल्प कसा बंद करता येईल यासाठी सर्वपक्षीय बैठक घेऊन निर्णय घेण्यात यावा.

मा. अध्यक्षानी पुन्हा आवाहन केले की पर्यावरणाविषयक मुद्दे मांडा इतर मुद्दे मांडण्याचे हे व्यासपीठ नाही. हे व्यासपीठ पर्यावरणाविषयक मुद्दे मांडण्यासाठी आहे. आपण जे मुद्दे मांडत आहात ते पर्यावरण विषयास धरून नाहीत. आपण कृपया या जनसुनावणीला वेगळे स्वरूप देऊ नका. गोंधळ वाढल्यामुळे मा. अध्यक्षानी परत माईक बंद करण्याविषयीच्या सुचना दिल्या तसेच सर्वांनी शांततेत बसल्याशिवाय माईक चालू केला जाणार नाही असे सांगितले.

उपस्थित लोकांनी बंद करा बंद करा अशी घोषणावाजी व गोंधळ चालू केली असता मा. अध्यक्षानी शांतता राखण्याचे आवाहन केले तसेच असेही सांगितले कि जनसुनावणी पुढे ढकलण्याची तरतुद कायदयामध्ये नाही. आपले म्हणणे रितसर मांडले असता ते रेकॉर्डवर घेतले जाईल. आपले म्हणणे मांडल्यानंतर टाटांनी पर्यावरण विषयक काय उपाययोजना केल्या आहेत हे देखील उपस्थितांना ऐकून घेतले पाहिजे जे ऐकून घेण्यासाठी आपण तयार नाही. आपण जर त्यांचे म्हणणे ऐकून घेतले तरच आपल्याला वस्तुस्थिती कळेल. आपण फक्त आपलीच वाजू मांडत आहात. आपल्या प्रश्नांना त्यांच्याकडे उत्तरे आहेत कि नाहीत हे ऐकून घेतले पाहिजे. त्यानंतरसुद्धा गोंधळ चालूच राहिला व मा. अध्यक्षानी शांतता राखण्याचे व बसून घेण्याचे पुन्हा-पुन्हा आवाहन केले. तरीही उपस्थित लोकांनी बंद करा बंद करा अशी घोषणावाजी व गोंधळ चालूच ठेवला. "बंद करा बंद करा कोळसा प्रकल्प बंद करा", "मा. हंडोरे साहब तुम आगे बढो हम तुम्हारे साथ है", "सर्व पक्षीय नेता तुम आगे बढो हम तुम्हारे साथ है" अशा प्रकारची घोषणा उपस्थित लोकांनी दिल्या.

१७. माजी नगरसेवक (नाव सांगितले नाही):

अ.क्र.	चर्चेतील प्रश्न
१.	"प्रदूषण हटाव चेंबूर बचाव" अशा प्रकारची घोषणा देत व लोंकाकडून म्हणवून घेत यांनी आपले म्हणणे मांडले. या चेंबूरकरांची चेंबूर बचाव ही मागणी असून ह्या कडे कधीही गांभीर्याने लक्ष दिलेले नाही. कंपन्यांकडून असे सांगितले जाते की प्रदूषणामध्ये शिथिलता आणणारी इंधने वापरू त्यामुळे प्रदूषण वाढणार नाही परंतु सर्व प्रदूषणकारी कंपन्या चेंबूरमध्ये येऊन आपले अस्तित्व तयार करित आहेत व प्रदूषण करित आहेत. त्यामुळे हा कोळसा प्रकल्प बंद करण्यात यावा.

जनसुनावणीसाठी जमलेल्या लोकांची घोषणाबाजी व गोंधळ सुरुच होता व ते माईकजवळ गर्दी करू लागले. लोकांचा गोंधळ वाढतच होता व लोकांच्या या वर्तनामुळे परिस्थिती हाताळणे अवघड झाले होते. मा. अध्यक्षांनी सर्व उपस्थितांना पुन्हा पुन्हा शांतता राखण्याची विनंती केली व असे स्पष्ट केले की, अशा गोंधळाच्या परिस्थितीत जनसुनावणी चालू ठेवणे अशक्य होईल आणि आवाहन केले की, आपल्या मुद्द्यांवर सकारात्मक दृष्टीने चर्चा करता येईल आणि उपस्थित मुद्द्यांवर प्रकल्प प्रवर्तकाकडून स्पष्टीकरण घेता येईल. परंतु उपस्थितांनी मा.अध्यक्षांच्या आवाहनाकडे लक्ष न देता "बंद करा, बंद करा, जनसुनावणी बंद करा" अशा घोषणा देणे चालूच ठेवले. गोंधळाची परिस्थिती वाढतच होती. मा.अध्यक्षांनी उपस्थितांना सांगितले की, आपल्या सर्व भावना, मते, विरोध इत्यादींची नोंद घेण्यात येत आहे व जनसुनावणीचे छायाचित्रीकरण करण्यात येत आहे. त्यांनी असेही सांगितले की, जनसुनावणीमध्ये शांतता राखणे गरजेचे आहे. तसेच आपण मांडलेल्या मुद्द्यांवर, आक्षेपांवर चर्चा व्हावी व त्याचा सामावेश इतिवृत्तात करता येईल. परंतु मा.अध्यक्षांच्या आवाहनाला लोकांनी प्रतिसाद दिला नाही व त्यांनी "बंद करा, बंद करा, जनसुनावणी बंद करा" अशा घोषणा चालूच ठेवल्या. लोकांचा गोंधळ व घोषणा वाढतच होत्या आणि परिस्थिती हाताबाहेर जाण्याची स्थिती निर्माण झाली. अशा बिकट परिस्थितीत जनसुनावणी थांबविण्याशिवाय दुसरा पर्याय नव्हता. म्हणून मा.अध्यक्षांनी जनसुनावणी बंद करण्यात येत आहे असे घोषित केले.



(प्र. वि. पाटील)
प्रभारी उपप्रादेशिक अधिकारी,
म. प्र. नि. मंडळ, मुंबई ३
तथा
आयोजक
जनसुनावणी समिती

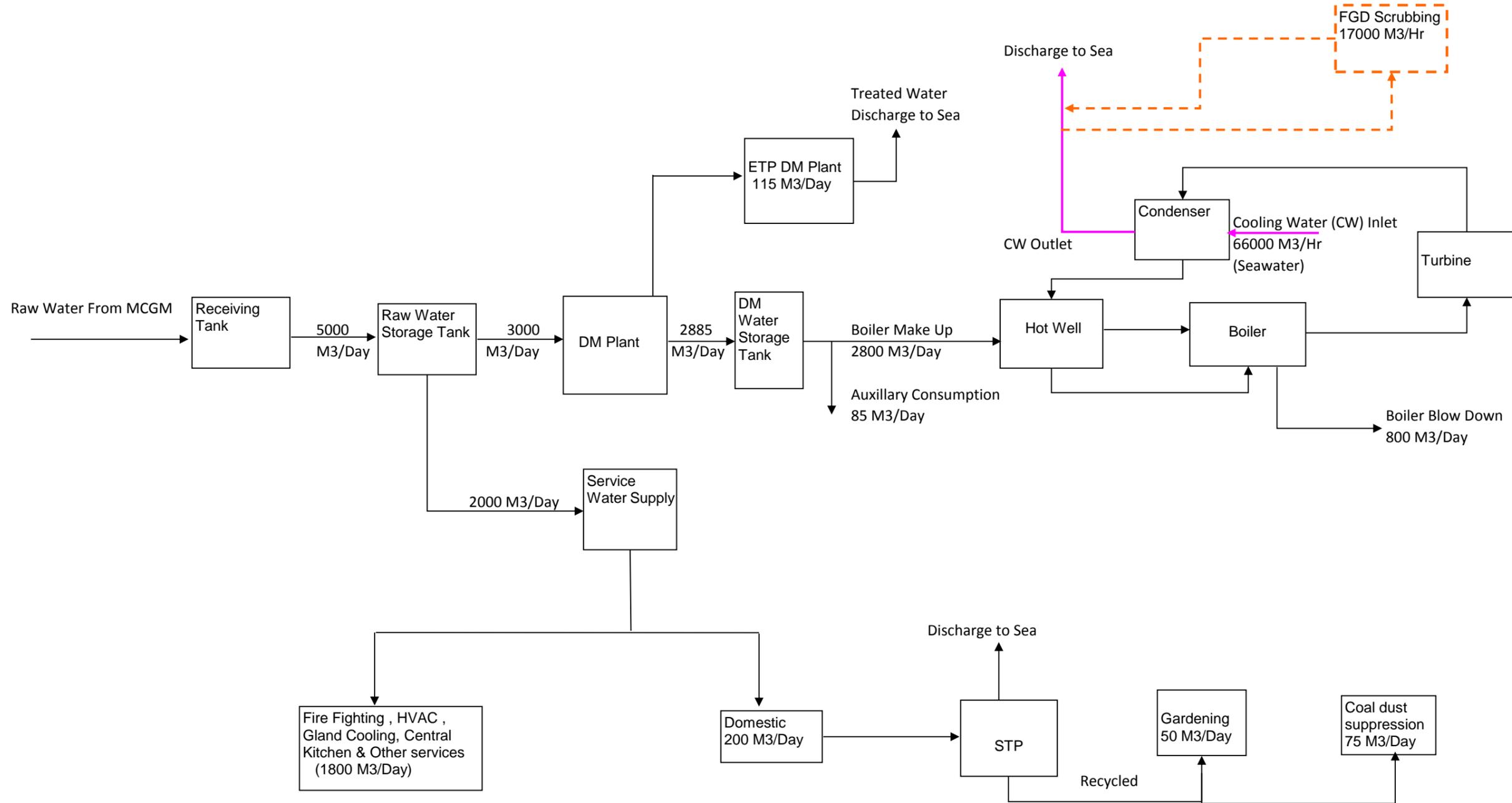


(डॉ. जि. बा. संगेवार)
प्रादेशिक अधिकारी,
म. प्र. नि. मंडळ, मुंबई
तथा
सदस्य
जनसुनावणी समिती



(डॉ. शिवाजी पाटील)
अप्पर जिल्हादंडाधिकारी
मुंबई उपनगर जिल्हा
तथा
अध्यक्ष
जनसुनावणी समिती

Water Balance Diagram



Annexure III

NATIONAL AMBIENT AIR QUALITY STANDARDS CENTRAL POLLUTION CONTROL BOARD

Notification : No. B- 29016/20/90/PCI-L- In exercise of the powers conferred by Sub-section (2) (h) of section 16 of the Air (Prevention and Control of Pollution) Act, 1981 (Act No. 14 of 1981) and in supersession of the Notification No.(s).S.O.384 (E), dated 11th April, 1994 and S.O. 935(E), dated 14th October, 1998, the Central Pollution Control Board hereby notify the National Ambient Air Quality Standards with immediate effect, namely : -

Sr.	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notify by Central Government)	Methods of Measurement
1.	Sulphur Dioxide (SO ₂), µg/m ³	Annual * 24 Hours **	50 80	20 80	* Improved West and Gaeke * Ultraviolet fluorescence
2.	Nitrogen Dioxide (NO ₂), µg/m ³	Annual * 24 Hours **	40 80	30 80	* Modified Jacob & Hochheiser (Na – Arsenite) * Chemiluminescence
3.	Particulate Matter (Size less than 10 µm) or PM ₁₀ µg/m ³	Annual * 24 Hours **	60 100	60 100	* Gravimetric * TOEM * Beta attenuation
4.	Particulate Matter (Size less than 2.5 µm) or PM _{2.5} µg/m ³	Annual * 24 Hours **	40 60	40 60	* Gravimetric * TOEM * Beta attenuation
5.	Ozone (O ₃) µg/m ³	8 hours ** 1 hour **	100 180	100 180	*UV photometric * Chemiluminescence * Chemical Method
6.	Lead (Pb) µg/m ³	Annual * 24 Hours **	0.50	0.50	* AAS/ ICP Method after sampling on EPM 2000 or equivalent filter paper *ED- XRF Using Teflon Filter
7.	Carbon Monoxide (CO) mg/m ³	8 hours ** 1 hour **	02 04	02 04	* Non Dispersive Infra Red (NDIR) Spectroscopy
8.	Ammonia (NH ₃) µg/m ³	Annual * 24 Hours **	100 400	100 400	* Chemiluminescence * Indophenol Blue Method

Sr.	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notify by Central Government)	Methods of Measurement
9.	Benzene (C ₆ H ₆)	Annual *	05	05	* Gas Chromatography Based Continuous Analyzer * Adsorption and Desorption followed by GC Analysis
10.	Benzo(a)Pyrene (BaP) – Particulate Phase only, ng/m ³	Annual *	01	01	* Solvent extraction followed by HPLC /GC Analysis
11.	Arsenic (As), ng/m ³	Annual *	06	06	* AAS/ ICP Method after sampling on EPM 2000 or equivalent filter paper
12.	Nickel (Ni) ng/m ³	Annual *	20	20	* AAS/ ICP Method after sampling on EPM 2000 or equivalent filter paper

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable shall be compiled with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

Note : Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.

Sant Prasad Gautam
[ADVT-III/4/184/09/Exty.]

Note : The notification on National Ambient Air Quality Standards were published by the Central Pollution Control Board in the Gazette of India, Extraordinary vide notification No(s). S.O. 384(E), dated 11th April, 1994 and S.O. 935(E), dated 14th October, 1998.