

MINUTES OF THE 4th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE ON ENVIRONMENTAL IMPACT ASSESSMENT OF THERMAL POWER & COAL MINE PROJECTS

The 4th Meeting of the reconstituted Expert Appraisal Committee (Thermal) was held on **November 18-19, 2013** at Conference Room, Core-7, 5th Floor, NTPC Bhawan, Scope Complex, Lodhi Road, New Delhi. The members present were:

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|----|----------------------------------------------|---|------------------|
| 1. | Shri A.S. Lamba | - | Chairman |
| 2. | Dr. C.R. Babu | - | Vice Chairman |
| 3. | Shri T.K. Dhar | - | Member |
| 4. | Dr. C.B.S Dutt | - | Member |
| 5. | Shri N.K. Verma | - | Member |
| 6. | Shri A.K. Bansal (only on 19 th) | - | Member |
| 7. | Shri G.S. Dang | - | Member |
| 8. | Shri P.D. Siwal | - | Member |
| 9. | Dr. Saroj | - | Member Secretary |

In attendance: Dr. M. Ramesh, Deputy Director, MoEF.

Dr. Ratnavel, Shri J.L. Mehta, Representatives of CPCB, WII and IMD were absent.

ITEM No.1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING.

The Minutes of the 3rd EAC were confirmed with minor corrections. However, while confirmation of the same, it was noted that the proposal of *1x660 MW Super critical Power Plant of M/s JSW Energy (Bengal) Ltd. at Salbani, District- West Medinipur, West Bengal for TOR* which was reconsidered in the 3rd EAC as the last item has been inadvertently missed out in the minutes. The Committee therefore decided that as agreed in the last meeting, the TOR of the aforesaid proposal of M/s JSW Energy Ltd. may be recommended and included in the last item of the 3rd EAC minutes.

Item No. 2: CONSIDERATION OF PROJECTS

18.11.2013

2.1 Modernization of existing unit -6 (500 MW) by change of fuel from LSHS/LSFO to imported Coal of M/s. The Tata Power Company Ltd. at Trombay Thermal Power Station at Mahul Road, District Chembur, Mumbai- reg. reconsideration for Environmental Clearance.

The proposal was earlier discussed in the 74th Meeting of the EAC held on May 20-21, 2013, which is extracted as under:

“The proposal was placed for consideration for environmental clearance as per provisions of EIA Notification, 2006. The project proponent along with its consultant M/s TCE Consulting Engineering Services gave a presentation and provided the following information:

The proposal is for modernization of existing Unit No.6 at Trombay Thermal Power Station (TTPS) by change of fuel from LSHS/LSFO to Imported Coal. The power station is located at village Mahul, in Kurla Taluk, in Mumbai Distt., in Maharashtra. No additional land is required for the proposed modernization of existing Unit No.6. The Trombay TPS is in operation since 1956 and Units-1, 2 & 3 have been decommissioned in early 1990's. Unit No.4 (150 MW) is based on gas which is presently kept as standby. Unit No.5 (500 MW) is coal based and is in operation since 1984. Unit No.6 (500 MW) became operational in 1990. Unit No.7 (180 MW) is a combined cycle gas based, commissioned in 1993 and Unit no. 8 (250 MW) is coal based commissioned in 2009. The coordinates of the Unit no. 6 lies between Latitude 19°00'12.66"N to Longitude 72°53'51.60" E. Imported coal requirement for modernization of Unit No.6 will be 2.0 MTPA. Unit No.6 is PF Boiler and cannot fire petcoke. Ash and Sulphur contents in imported coal will be 4.5% and 0.28% respectively. GCV of the coal will be not less than 5000 Kcal/Kg. About 216 MT/day fly ash and 54 MT/day bottom ash will be generated. Ash utilization of 100% from day one of commercial operation of Unit no.6 will be achieved. No additional water is required. Unit No. 5 and 8 has FGD's installed. It is proposed to install FGD for Unit No.6 as well. There are no National Parks, Wildlife Sanctuaries, Heritage sites, tiger/Biosphere reserves etc. within 10 km of the site. Public hearing was held on 15.01.2013. Cost of the project will be Rs. 1174.0 Crores.

The Committee noted that while the proposal was considered for TOR in its 38th Meeting held during December 12-13, 2012, it was deliberated that while the present modernization proposal by change in fuel will be environmentally better as compared to Oil fired power generation, the project proponent need to address the issues of environmental impact due to coal transportation both inland and at sea. The Committee observed the logistics of coal transportation has been studied by the project proponent and noted the percentage contribution in traffic (ship movements) due to coal requirement for Unit No.6 will be 0.71% as against 0.70% without Unit No.6 coal requirement i.e. an increase of only 0.01%.

The Committee also discussed the power generation in Mumbai and the embedded power to Mumbai to cater to the increasing power demand of Mumbai. It was observed that 2377 MW is embedded generation for Mumbai and the present peak demand is about 3391 MW. It was observed that owing to transmission bottle necks in Mumbai Metropolitan Region (MMR), the necessity

of power generation in Mumbai itself is a necessity to cater the growing demand of Mumbai power consumption.

On the possibility of gas based power generation it was noted that as on date about 8500 MW Gas Based Power Projects are stranded due to unavailability of gas. That since 2008 M/s Tata Power Ltd. has been perusing with the Ministry of Power for gas allocation for Trombay Power Station. It was also noted that the Ministry of Power vide its letter dated March 14, 2012 has advised developers against planning power projects based on domestic gas till 2015-2016 as Ministry of Petroleum & Natural Gas has indicated that no additional domestic gas is available till 2015-2016.

The Committee noted that AAQ baseline data was collected for the period March-May, 2102and TOR was prescribed on 25.01.2012. Thereafter after the site visit of the sub-group of the EAC, additional TORs were also prescribed on 24.08.2012.

The Committee deliberated the implications due to modernization and noted that as against the Oil fired Unit no.6, the Coal fired option seem to benefit the environment as under:

Scenario	SO₂ (µg/m³)	NO_x (µg/m³)	PM (µg/m³)
Existing Oil Fired Unit No.6	3.91	4.58	2.24
Modernization using coal as fuel	3.85	4.43	1.94
Change	-0.06 (-1.5%)	-0.15 (-3.3%)	-0.3 (-13.4%)

The Marine Impact Assessment has been carried out by Central Marine Fisheries Research Institute (CMFRI), Mumbai and the report indicates no evidence of any major environmental damage to the marine environment due to existing operations of coal berth which is already in use for unloading coal for the plant as well as operation of barges to carry coal to the coal berth. The approach velocity of water was noted as less than 0.11 m/s and screens (25 mm) have been introduced at the intake point to prevent sucking of juveniles of marine animals.

A study has been carried out by M/s Indomer Coastal Hydraulics (P) Ltd. to assess why sea water around intake point is muddy in color with high suspended particulate matter and whether it is due to sea erosion or sea dumping. The study report indicates that the strong flood and ebb tidal currents agitate the finer fractions of silt and clay and increase in the

concentration of suspended particle which is a typical natural phenomenon for naye tidal mud flat morphology. That the possibility of dredge sediments of the disposed spoil getting deposited in the intake region is very limited.

CRZ mapping has been carried out by Centre for Earth Science Studies, Thiruvananthapuram, Kerala.

It was informed that the proposed FGD for Unit No.6 will be using sea water, which after treatment will be discharged in the existing cooling water channel. That an area of 0.2 ha will be required for construction of outfall point in the existing cooling water discharge channel. To bring down water temperature, a series of surface aerators has been installed in the discharge channel. An area of 0.7177 ha of mangrove area consisting of about 520 mangrove plants will be required to be cleared to help better cooling of sea water. Application for the same has been made to the Forests Department for diversion of mangrove area. Alternatively a much larger mangrove plantation has been identified in consultation with the State Forests Department.

It was further informed that Bombay Natural History Society (BNHS), Mumbai has carried out study for mangrove conservation and development of the area and has suggested that a mudflat located in the South East side of Trombay, which is an ecosystem in itself, should not be disturbed and mangroves around need to be conserved. That existing mudflats are required to be conserved being an important feeding area of large congregations of waders and flamingos.

The Committee noted the above and recommended that over and above the alternative site identified for mangrove plantation, the project proponent shall identify degraded mangrove sites within 10 kms radius of the power station and regenerate the same. Accordingly, the project proponent shall submit an action plan for carrying out such an activity.

It was also informed that action plan has been prepared for green belt / shelter belt consisting of bamboos and native species of trees and shrubs around coal berth, coal yard and open areas within Trombay. That additional 1445 nos. of shrubs and 395 nos. of creepers have been planted so far to reduce fugitive dust emissions. That based on survival rate, re-plantation exercise will be carried out. That grassing of the area has been carried out to prevent dust emission.

It was reported that leachability test carried out through MoEF approved laboratory indicates that no heavy metals are present in the ground water near the ash pond.

The Committee also viewed the videos recordings of the public hearing and noted that people gathered for public hearing seem be present with premeditated intension of disrupting the public hearing proceedings and not allowing to the

proceedings further. It was noted that some political workers reportedly present in the said meeting were shouting slogan constantly to wind up the public hearing. The Chairman of the Public Hearing Panel was seen requesting people to maintain calm and to allow the proceedings. Later due to continuous disturbances of slogan shouting the Chairman announced that all objections, suggestions, complaints and comments etc are being recorded and videography is being carried out and any person may raise issues and objections. Finally as the situation was not improving the Chairman announced the public hearing as closed.

It was noted that the Maharashtra State Pollution Control Board (MSPCB) have furnished the proceedings of the public hearing along with objections from different quarters for perusal and necessary action of the Ministry. It was further observed that notwithstanding the objections (505 nos.) received, a larger representation of support letters (637 nos.) for the proposal has been also forwarded by the MSPCB.

The issues raised and objections received and the response made by the project proponent is tabulated under:

Issues raised	Response made	Action plan proposed
<ul style="list-style-type: none"> • Transportation of coal from Mumbai Port Trust to the Tata Power Plant in open trucks is being made without any safety norms • Shivdi, Wadala and Chembur are facing the ambient air and public health impacts from blowing coal dust 	<ul style="list-style-type: none"> • No coal is being transported by trucks presently to Trombay Tata Power Plant. Coal is transported from captive jetty by closed/pipe conveyor. Present system will be strengthened for better environment management • The ambient air is monitored regularly near coal storage area, jetty and 2 other ambient air quality monitoring stations. This is also being monitored through automatic ambient air quality as well as by 3rd party (MoEF Recognised Lab). The emissions from Tata Power are well within the stipulated standards and there is no adverse impact of Tata Power operation on AAQ in Mumbai region. GLC details as given in EIA confirms the same. • For existing coal based units, 	<ul style="list-style-type: none"> • It is planned to install additional screw un-loader, stacker reclaimer & piped conveying system for Unit # 6 modernization by change of fuel • High Efficiency ESP (50 mg/Nm³) will be provided for Unit # 6 to further minimize the impact of PM emission.

	<p>ESPs are already installed & coal dust suppression system in coal yard is in place. (Please refer Photographs, AAQM (Jun'12 – April'13) details attached). These reports are being submitted to MPCB regularly.</p>	
<ul style="list-style-type: none"> • The hot water released from this plant which is going to directly and indirectly affect the air and water quality of the sea and the locality as well as the environment and sea life due to various hazardous contents in coal and will directly affect the fishing on which livelihood of the Koli community is depend. And will be an clear cut violation of CRZ norms 	<ul style="list-style-type: none"> • Tata Power is maintaining the discharge water temperature below 7^o C which is well below the MPCB specified limit. Marine impact assessment carried out by CMFRI reveals that there is no adverse impact on marine life due to proposed modernization. The length of the discharge is approx 1.2 km from the discharge point and fishing zone is beyond this limit • Due to environmental management while handling the coal at coal berth and during unloading from ship to barges, no contamination of sea water is envisaged due to mechanised equipment • There is no violation of Coastal Regulation Zone (CRZ) norms by Tata Power. 	<ul style="list-style-type: none"> • To reduce the temperature of discharge water beyond compliance agitators are installed in the channel (Please refer photographs attached in additional ToR presentation) • Tata Power will provide screw un-loader for coal unloading at coal berth • Tata Power will obtain due permission from MCZMA for the activities falling in CRZ area
<ul style="list-style-type: none"> • There is no program by either government or by the company regarding the access to the health care, Plantation, Nutrition, 	<ul style="list-style-type: none"> • As a part of CSR activities Tata Power is carrying out various health check-up camps in nearby villages. • Tata Power is also doing plantation within the plant area and also in the nearby villages. • The Companies in the area have formed a Forum (MARG) to deliberate on any such issues and 	<ul style="list-style-type: none"> • These activities are part of Tata Power CSR plan (Please refer CSR Plan which is included in this PPT and also refer Annexure – XVII of EIA report)

<p>Employment, and the formation of Monitoring committee involving the 50% local residents</p>	<p>concerns and already offered to include community leaderships into this Forum</p>	
<p>• There will be generation of 216 Metric Tones / Day of Fly Ash & this will further add to the already existing suspended particulate matter (SPM), which will further aggravate the pollution levels & cause higher respiratory ailments and terminal life threatening diseases like Cancer to the surrounding poor inhabitants of the Trombay Plant</p>	<ul style="list-style-type: none"> • The ash will be stored in closed silos & transported in closed bulkers which does not contribute to any dust emissions. Trombay has already achieved 100 % fly ash utilisation for exiting units. The ash generated after proposed modernisation will also be consumed 100% from the date of commissioning. • This will not create any pollution and fly ash utilization plan is in accordance with fly ash notification of MoEF. • Presently air pollution control equipments are installed with all the existing stack. An ESP will also be installed with modernization to keep SPM emission below the stipulated standards. • TISS findings on health is attached 	<ul style="list-style-type: none"> • Total fly ash generation after modernization will be 450 MT/Day & demand of Fly ash for RMC from various vendors FY 12 was approx. 630 MT/Day against our present generation of 200 MT/Day. Tata Power has already explored for disposal/ utilization of fly ash with various vendors. • Due to installation of ESP and keeping emission well below the stipulated standard, no health impacts are envisaged.
<p>• The EIA has been conducted during the summer season. However, for proper evaluation air pollution</p>	<p>• EIA was carried out as per ToR issued by MoEF. One season monitoring data is sufficient as per the requirement of EIA notification. GLC is calculated considering a worst case scenario. This GLC is 1.94 um/m3 in SE direction at 4.5 km</p>	<ul style="list-style-type: none"> • ESP is proposed in Unit #6 for control of SPM emission • FGD is proposed for control of SO₂ emission from Unit #6 • Advance design

<p>impacts, monitoring and data collection should be done during winter also. Therefore, given the sensitive nature of the project site, and the location of project site 10 densely populated area of Mumbai city, a rapid EIA with one-season data collection is insufficient</p> <ul style="list-style-type: none"> • EIA says that no additional land will be required and within existing facility, various installations will be created to utilise the ash and coal storage. However, it is known fact that setting up any installation requires CRZ clearance for coastal city Mumbai. The EIA is silent about how this will be ensured 	<p>and this is not going to have significant impact on Mumbai city</p> <ul style="list-style-type: none"> • No additional land is required. Though the activities (coal storage & conveyor) falls in CRZ notified area. However, these are within the existing Tata Power land. The permission from MCZMA shall be obtained for the activity falling in CRZ area. The application for the same has been already submitted to MCZMA 	<p>burners are considered for control of NOx emission.</p> <ul style="list-style-type: none"> • Proposed modernization with these APCE reduces the impact of Unit #6 on the exiting AQ level. This has been recorded in EIA study. • Modernization activity will be started only after obtaining necessary permissions from regulatory authorities
<ul style="list-style-type: none"> • What were the orders passed by the Bombay 	<ul style="list-style-type: none"> • Bombay High Court had ordered for decommission & dismantle unit 1,2&3. These units were 	<ul style="list-style-type: none"> • Action completed as per Bombay High Court order

<p>High Court when the environmental clearances to Units 5, 6 & 7 were challenged in the Bombay High Court</p> <ul style="list-style-type: none"> • What type of FGD units are operational in the existing units? What is their performance in removing sulphur emissions from the stacks? How is the solid waste from the FGD disposed off 	<p>decommissioned & dismantled in 1993.</p> <ul style="list-style-type: none"> • The conditions accorded by Dept. of Environment, GoM for granting EC for Unit #6 have been complied with. • TTPS has sea water based FGD for removal of SO₂ from flue gas. Technology is proven and working satisfactorily in developed countries including Japan. There is no generation of solid waste from sea water based FGD plant. SO₂ emission from station is always maintained within the stipulated limits of MPCB 	<ul style="list-style-type: none"> • Though we have studied different types of FGDs for proposed modernization however, sea water based FGD will be best choice for Unit #6, Trombay as this does not generate solid waste as in scrubbing type FGD.
<ul style="list-style-type: none"> • Please explain how the Tata Power Ltd has been permitted to divert gas allocated for unit 6 for running Unit 7. Please furnish copies of all the correspondence in this regard. • What is the requirement for green belt as prescribed by the MoEF/EAC? Please provide a detailed map 	<ul style="list-style-type: none"> • There is no diversion of gas from Unit #6 to Unit #7. In fact Unit #6 is based on Oil/LNG & the proposed modernization & change of fuel is from Oil to low Ash & Low Sulphur imported coal. • The requirement is 33% and Tata Power has allocated this area for plantation, horticulture & green belt. green belt / plantation details are provided in EIA report. (Please refer annexure XVI of EIA report) • TTPS has adequate measures to prevent impingement, entrainment and entrapment of marine life • Water intake velocity of 0.11m/s is maintained to avoid impact on marine life 	<ul style="list-style-type: none"> • No action is required. • The area have been identified around the periphery of coal yard and berth for further plantation. Approx. 1500 saplings have already been planted in 2012 in this area (Please refer photographs given in EIA & this presentation) • Further, mesh size of the nylon net has been reduced since Sept. 12 from 40 mm to 25 mm

<p>showing the green belt.</p> <ul style="list-style-type: none"> • What other measures have been taken by Tata Power to minimise the damage and death of marine organisms 		<p>openings provided at the intake to avoid entrapment of marine life.</p> <ul style="list-style-type: none"> • Silt curtain is under experimentation will also help to avoid entrapment of marine life
<ul style="list-style-type: none"> • What will the impact of the additional emissions on the birds in Thane Creek and the wildlife in SGNP. 	<ul style="list-style-type: none"> • The air quality modelling carried out shows that there is no additional emissions due to modernisation of Unit #6. Also GLC suggests the worst scenario is 1.94 ug/m³ at 4.5 km in SE of the plant. It clearly shows that there will be no impact on the SGNP which is 14 km away. Further, the installation of APCE as suggested in Action plan will minimize the environment impact 	<ul style="list-style-type: none"> • ESP is proposed in Unit #6 for control of SPM emission • FGD is proposed for control of SO₂ emission from Unit #6 • Advance design burners are considered for control of NO_x emission. • Proposed modernization with these APCE reduces the impact of Unit #6 on the exiting air quality level. This has been recorded in EIA study.
<ul style="list-style-type: none"> • What is the radioactivity, Selenium, Arsenic and Mercury content of fly ash bricks • Was the existence of mangroves at the Tata Power site at Trombay disclosed in the 	<ul style="list-style-type: none"> • Radioactivity analysis of Fly Ash and coal has been carried out by BARC. Mercury, Arsenic and selenium etc. analysed by recognised laboratory and these results are included in EIA report at Annexure – V and XIV. Fly ash is used in construction industry including bricks & cement & is in line with fly ash notification of MoEF. • There is presence of mangroves near TTPS of Tata Power. These 	<ul style="list-style-type: none"> • Will continue to monitor radioactivity and other elements in fly ash & coal • TTPS will preserve/transplant/undertake new plantation of Mangroves as per the need and suggestion of MCZMA while

<p>earlier EIA Reports prepared for these projects</p>	<p>are reported in EIA prepared for Unit # 6 modernisation by change of fuel project</p>	<p>granting clearance for CRZ activities.</p>
<ul style="list-style-type: none"> Mercury emission from coal burning are concentrated as they work their way up the food chain and are converted into methyl mercury, a toxic compound which harms both wildlife and people who consume freshwater fish. Coal burning is a key source of methyl mercury in the environment. "Power plants are responsible for half of the mercury emissions in the United States 	<ul style="list-style-type: none"> Heavy metal analysis for coal and fly ash has been carried out. All the characteristics are within the prescribed standards. (Refer Annexure V of EIA report) 	<ul style="list-style-type: none"> Will continue to monitor Mercury in stack emission
<ul style="list-style-type: none"> The EIA says that low ash coal will be used to reduce the quantum of fly ash generation however, the same cannot be avoided in any thermal plant, which in case of 	<ul style="list-style-type: none"> The imported coal containing low ash & low sulphur will be utilized for the proposed modernization project. The ash content of the coal will be approx. 5%. 	<ul style="list-style-type: none"> Tata Power will ensure to use coal maximum 5% ash content. Bottom ash will be utilized for brick manufacturing within Trombay unit

<p>the project would be more as the project has proposed to use imported coal with ash content of 4% to 5% against the preferable imported coal of ash content 3% (i.e., coal with such ash content is suppose to control the fly ash and bottom ash yield).</p>		
<ul style="list-style-type: none"> • The EIA has also completely ignored CO₂ emissions from the proposed plant. This is not acceptable, as the thermal power sector contributes 11 per cent of total CO₂ emissions, 65 per cent of the industrial greenhouse gas emissions 	<ul style="list-style-type: none"> • Tata Power is committed to reduce its carbon footprint and the strategic intent is to generate 20-25% generating capacity from non-carbon emitting sources such as Hydro, Solar, Wind and waste heat etc. We are calculating CO₂ emission across Tata Power & reporting to CDP, UK 	<ul style="list-style-type: none"> • Tata Power will continue to report to CDP, UK as well maintain strategic intent to generate 20-25% generating capacity from non carbon emitting sources (NCES) such as Hydro, Solar, Wind and waste heat etc. Present installed capacity in Wind is 376 MW, Solar is 29 MW and Hydro is 447 MW
<ul style="list-style-type: none"> • Tata Consulting Engineers (TCE) is a Tata Group company owned by Tata Sons. How can you agree to the project EIA 	<ul style="list-style-type: none"> • TCE is an accredited consultant by NABET (a wing of Quality Council of India (QCI)) as a consultant for conducting EIA studies. This is as per the requirement of MoEF. • It should be noted that Trombay Power plant is at Chembur for 	<ul style="list-style-type: none"> • EIA report prepared as per the ToR given by MoEF

<p>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.</p>	<p>more than 50 years now. The present project is only change of fuel from oil to coal by ensuring that there is no addition to the pollution level.</p> <ul style="list-style-type: none"> • The feasibility of importing power was explored by Tata Power, but it was not feasible due to high transmission and distribution losses and other infrastructural problems in the city of Mumbai. 	
<ul style="list-style-type: none"> • Will TPC guarantee that the power produced in Trombay Plant will be given only to poor suburban consumers • What are the 	<ul style="list-style-type: none"> • Power is given to only Mumbai consumers. It is contracted with BEST and Tata power on long term basis. • The environmental management practices adopted by TTPS has resulted better environment within the plant and surrounding area and no health impacts have been reported. TISS has carried 	<ul style="list-style-type: none"> • Tata Power, in line with it's PPA will continue to supply power to Mumbai consumers • Adequate emission control measure as proposed for the modernization project to avoid

health impacts likely as a result of burning additional coal at Trombay.	out independent survey in 2011-12 for health status in M (East) ward. Findings are attached.	adverse health impact.
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The Committee observed that recommendation for conduct of second public hearing may not be the right solution as there seems no indication to suggest that the same outcome will not be repeated. It was felt that even if a second public hearing is conducted, the chances of disruption by the same elements seem inevitable and no purpose could seem to be solved. The Committee therefore decided that the objections received in the Ministry shall be duly addressed by the project proponent and its reply submitted, which seem to have been already done.

Observing that Municipal Councilors, MLAs etc. seem to be objecting to the modernization project, despite the fact that the proposed modernization may be partially better off environmentally, the Committee decided that the issues raised and the reasons of the objections need to be duly detailed out by the project proponent for sake of brevity.

In the course of the deliberation it was also noted that the project proponent while presenting their case has confined to the Addl. TOR point-wise compliance even though the EIA Report seem to have been prepared in accordance with the TOR issued on 25.01.2012 and the Addl. TOR issued on 24.08.2012. The Committee therefore desired that the project proponent make a presentation in accordance with point-wise compliance (as applicable) of TOR issued on 25.01.2012 and Addl. TOR issued on 24.08.2012.

The Committee also informed the project proponent, of a representation received from one Shri Debi Goenka, of an organization called 'Conservation Action Trust (CAT), a copy of which was already earlier furnished to the project proponent for their response. The project proponent furnished their reply and the issues raised were deliberated. The Committee advised the project proponent that the response given by them may be forwarded also to Shri Debi Goenka for his information.

The Committee further observed a lot of old issues raised at different forum (including the Bombay High Court) seems to be surfacing again and again and prima facie could not find much material evidence to suggest malafide disregard for environmental conservation by the company. The Committee therefore advised the project proponent to bring all such material information in public domain so that concerned citizens are informed of the reality rather than being made to flow with the perception of wrong doing allegations.

In view of the above, the Committee decided that the proposal be deferred and shall be reconsidered after submission compliance to the observations made above.”

On submission of the information sought, the matter was again placed before the EAC for its re-consideration.

It was informed that the mangrove area is under the possession of Mangrove Cell of Forest Department, Govt. of Maharashtra. That M.S. Swaminathan Research Foundation, Tata Power and Mangrove Cell of Govt. of Maharashtra will be carrying out the mangrove plantation work under a tripartite agreement in 25 ha of degraded mangrove area which is 11 km away from Trombay and situated on the opposite bank of Thane Creek. The scheme is approved by Forest Department, Govt. of Maharashtra vide letter dated 01.10.2013.

It was also informed that in order to change the perception of the people and to disseminate the project related information, the project benefits were shared with the public at large through various local and national newspapers. Meetings were organized outside Trombay to share the information related to project with M.Ps, M.L.As, N.G.Os and Environment Activists. Visits of M.Ps, M.L.As, Municipal Councilors, N.G.Os and Environment Activists were organized to the TTPP. Review of the EIA report was carried out by NEERI. All documents related to project have been uploaded on Tata power's website. The NEERI Report inter-alia finds that with sustained efforts of last couple of decades, the air quality of Chembur has shown improvement despite increased vehicular activity and also in some cases expansion of industries. The simulation of current operation and predictions using ISCST3 model indicates that the overall air pollution will come down marginally due to better air pollution control equipments proposed for coal conversion project. No significant impact on land, water and ecology is anticipated due to the proposed project with proper EMP and control systems. The EMP incorporated in the EIA report is adequate to address the air pollution issues in the area.

The point wise compliance to the ToR and Additional ToR was again presented. It was also informed that a detailed reply to the issues/concerns raised by Mr. Debi Goenka during the Public Hearing dated 15.10.2013 was submitted to his office on 05.07.2013. It was informed by the Project Proponent that no further comments / response have been sent by Shri Debi Goenka.

That in compliance to the Hon'ble High Court's Order in 1992 read as **“We dismiss the Writ Petition, but subject to the observations and directions in relation to the implementation of the condition regarding decommissioning of Unit # 1 to 3 which shall be treated as one of inflexible and indilutable character”**, Units 1, 2 and 3 were scrapped

during the year 1992-1994. The details related to the said order along with other project documents have been displayed on Tata Power's website for the information of general public.

Based on the information and clarifications provided by the Project Proponent and detailed discussions held on all the issues, the Committee *recommended the project for environmental clearance* subject to stipulation of the following specific conditions:

- i) A 30 m flux tower with a provision of 8 level high response micro meteorological instruments with a provision of data logger shall be installed for AAQ monitoring;
- ii) Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation shall be submitted periodically.
- iii) A stack of 275 m height shall be provided with continuous online monitoring equipments for SO_x, NO_x and PM_{2.5} & PM₁₀. Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.
- iv) FGD shall be installed. The FGD system shall be so designed such that non-functional of the FGD shall render the Unit non-functional.
- v) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm³. Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.
- vi) COC of 1.25 shall be adopted.
- vii) Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.
- viii) Regeneration of mangrove /Degenerated mangrove located in the study area (if any) shall be carried out/adopted in consultation with the concerned Dept. of the State Govt.
- ix) A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises
- x) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.
- xi) Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of

- time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.
- xii) Long term study for radio activity and heavy metal in coal and fly ash, shall be carried out through institutes like AMD, Hyderabad, Central Power Research Institute, Bangalore, Mangalore University etc. and report submitted to R.O of the Ministry from time to time.
 - xiii) CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.
 - xiv) An amount of Rs 5.0 Crores as one time investment shall be earmarked for activities to be taken up under CSR during construction phase of the Project. Recurring expenditure for CSR thereafter shall be Rs 1.0 Crores per annum till the life of the plant. Social Audit by a reputed University or an Institute shall be carried out annually and details to be submitted to MOEF besides putting it on Company's website.
 - xv) An Environmental Cell comprising of at least one expert in environmental science / engineering, occupational health and social scientist, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the head of the organization who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.

2.2 2x660 MW Super critical coal based Thermal Power Project of M/s Welspun Energy UP Pvt. Ltd. at village Dadri Khurd, Tehsil Mirzapur Sadar, District Mirzapur, in Uttar Pradesh- reg. reconsideration for Environmental Clearance

The proposal was earlier discussed in the 70th Meeting of the EAC held on March 26, 2013, which is extracted as under:

“The proposal is for consideration for environmental clearance. The project proponent made a presentation along with its consultant M/s J. M. Enviro Net Pvt. Ltd., Gurgaon and provided following information:

The proposal is for setting up of 2x660 MW Super critical Coal Based Thermal Power Project at village Dadri Khurd, in Tehsil Mirzapur Sadar, in District Mirzapur, in Uttar Pradesh. The proposal was earlier proposed to be set up based on domestic coal but due to non-availability of the domestic coal, it has been decided to go ahead with imported coal from Indonesia for an interim period until domestic coal is available. The land required will be 875 acres, out

of which 15.63 acres will be single crop agriculture land; 853.74 acres will be barren Land; 5.44 acres will be water body; and 0.19 comprises of human settlements. The co-ordinates of the site are located within Latitude 24°58'41.645" N to 25°00'16.887" N and Longitude 82°39'50.425" E to 82°41'03.728" E. Imported Coal requirement will be 5.27 MTPA. Coal will be obtained from Indonesia. Coal supply agreement had been signed with M/s Sirdi Sai Goodearth International PTE Ltd. Ash and sulphur contents in imported coal will be 14% and 0.34% respectively. Gross Calorific value of the coal will be 4400 kcal/kg. About 0.59 MTPA of fly ash and 0.15 MTPA of bottom ash will be generated. Ash will be supplied for manufacturing of Cement and MoU have been signed with M/s ABG Cement Ltd. Ash pond area will be 180 acres and co-ordinates of the ash pond site will be within Latitude 24°59'46.8" N to 25°0'14.5" N and Longitude 82°40'8.2" E to 82°40'57.8" E. Lean concentration slurry fly ash disposal system will be adopted. Bi-flue Stack of 275m will be provided. Water requirement of 36 MCM will be sourced from the Ganga river through a pipeline at a distance of about 17 km from the project site. Irrigation Department Govt. of U.P has accorded water allocation vide its letter dated 09.09.2011. CWC has also approved the water allocation of 36 MCM from River Ganga vide its letter dated 12.10.2011. R.O System will be installed and zero discharge will be adopted as far as practically possible. Induced draft cooling system will be installed. There are no National Parks, Wildlife Sanctuaries, Heritage Sites, Tiger/Biosphere reserves etc. within ten km of the project site. Public Hearing was held on 07.04.2012. Cost of the project will be Rs.7500 Crores.

M/s Welspun Energy UP Pvt. Ltd. also made point-wise TOR compliance. It was observed that TOR for the power project was issued on 15.06.2011, whereas AAQ Data has been collected for the period March to May, 2011. The project proponent clarified that while TOR was recommended, they had requested the Committee for allowing using AAQ Data they have started collecting data, which the Committee had duly conceded. The Committee perused through the minutes of the meeting wherein recommendation for TOR was made and noted consent had been given to use data collected already. It was noted that proposal for TOR was considered twice i.e in April, 2011 and in May, 2011 and recommendation for TOR was made during the meeting held in May, 2011.

It was also informed by the project proponent that the power project has 100% PPA with UP Power Corpn. Ltd.

It was observed that the imported coal document furnished is from a trading company and does not appear to be from the project proponent's own mine in Indonesia as reported to be sourced from for the power project. The Committee desired that clarification of the same be submitted.

Deliberating the issue of uncertainty in coal (including imported coal from Indonesia), the Committee observed that in order to avoid dis-service to financial

institutes by creating stranded assets, the issue of firm fuel and water availability need to be deliberated at length and need to be confirmed to its satisfaction. It was therefore decided that the project proponent shall submit documents to submit viable fuel source for running the power project (2x660 MW) clearly indicating source of fuel and impact of low grade imported coal on the boiler efficiency.

The issue of coal transportation from the country of origin to the TPP site and the bottle necks of Port and Railways was also observed to have been inadequately dealt with and details on the same has been sought.

The Committee therefore decided over and above financial viability of using imported coal from Indonesia, the project proponent shall submit and explain tripartite agreement entered with the U.P Govt. The Committee also desired further information from the project proponent the legal tenability of the PPA entered into with UPPCL.

Regarding water availability the Committee noted that the CWC clearance has many conditions and clearly indicates that between January to May no water can be drawn. The project proponent informed that a storage reservoir is being planned to cater for six months requirement at a site of about 4.5 Km from the TPP site. That the existing Dam (Upper Khajuri Dam) which is highly un-utilized will be utilized to by way of pumping and storage excess monsoon water for use of the power plant using lean season period.

The Committee recommended that the project proponent shall ensure that the power project is self-sufficient in its water requirement for which necessary water conservation practices shall be done.

It was therefore decided that the project proponent shall submit a well-planned water harvesting scheme, development of small check dams in the area, flood water storage schemes (as may be feasible).

The Committee expressed that the Dam must have been built long ago for irrigation and drinking water needs. It was therefore decided that the project proponent shall submit details of existing conflict of interest of the same water source between drinking, agricultural and industrial in the region.

Regarding water availability study the project proponent informed and submitted a study report prepared by M/s WAPCOS, which inter-alia includes area drainage study. It was also informed that Geo-Hydrology study was carried out by M/s Minmec Consultant; seismic study by IIT, Chennai; Need Based Assessment Study by M/s XIDAS, Jabalpur; Feasibility Study for Railway Siding by M/s Aarvee Consultants and take off stations finalized in consultation with Railways. That Biodiversity Assessment has been carried out by Dr. Justus Joshua of M/s Green Future Foundation and Conservation Management Plan

accordingly prepared. That till date expenditure to the tune of Rs 126.48 Crores has already been incurred.

The Committee was informed that a complaint against setting up of the proposed power project by one Shri Baliram Singh, President, Van Upvan Conservation of Nature Environment Society, Shamsheerpur, in Chandoli Distt., in U.P has been forwarded by the Prime Minister's Office. The Committee perused through the contents of the complaint and decided that the project proponent shall submit detailed point-wise clarification (both in Hindi and in English) on the issues raised.

The Committee also discussed the issues raised in the public hearing and the responses made by the project proponent. The major issues raised were regarding employment opportunities to stop percentage of migration; wildlife conservation; jobs for poor and unemployed land losers; plan for the women empowerment; pollution control instruments to be installed; conventional and beneficial plants to be planted while development of green belt; education and medical facilities for villagers etc. The project proponent also informed that there are no litigations in any courts w.r.t the proposed power project.

The project proponent in the public hearing responded that preference for job opportunities will be given to land losers. That the company will set up a separate CSR team for development activities in the area which shall include health care facilities, infrastructure improvement and refurnishing of schools. That Rs. 10 Crores has already been projected for various women empowerment activities.

The Committee noted that while presenting their case on issues raised and responses made during public hearing the project proponent have mixed up the responses made and the action plan for implementation. That perusal of the presentation itself indicates that no concrete action plan seems to have been formulated. *The Committee therefore decided that the project proponent shall clearly indicate the issues raised in the public hearing and the actual response made and followed by specific action plan for implementation and submit the same. The Committee also advised the project proponent that they shall integrate locals as part of the development process of the power project and accordingly formulate an action plan. As part of health care venture it was observed that the project proponent may tie up with local community health care centers. It was also advised that long term preventive health care measures need to be the focus and the project proponent need to obtain medical records of endemic diseases in the region in case anything worthwhile scheme is proposed to be formulated in consultation with the local Public Health Department.*

On being narrated the health care services already being conducted in the area, the Committee noted the good services purportedly being carried out by the project proponent in health sector in three villages in the area.

On the issue of wildlife, the Committee noted that the secondary data of wildlife of the area seem to indicate a fairly good population of Schedule-I species and decided that a conservation action plan vetted by the office of the concerned Chief Wildlife Warden shall be submitted.

On the issue of details of land of the thermal power project site, the Committee observed that details as per Revenue records shall be submitted.

In view of the shortcomings noted above the Committee decided that the proposal be deferred for re-consideration at a later stage on submission of the clarifications/study reports sought.”

On submission of the information sought, the matter was again placed before the EAC for its re-consideration.

The committee noted that a representation has been received from Banaras Hindu University requesting to review of siting of the project as it may have adverse impact on the residents of the University and particularly in Rajiv Gandhi South Campus. The committee also noted that the PP in the presentation now made is silent on the clarifications sought on the representations forwarded by the Prime Minister's Office to the Ministry. The committee therefore sought the response of the PP on the above representations.

It was also noted that relevant documents from the Port and Railway Authorities in support of the imported coal handling capacity and MoU/agreement as may be necessary are not available. The committee was not satisfied with the firm water availability especially during the lean season for the power project and therefore sought detailed water source availability for the entire year. It was also decided that the wild life conservation plan prepared shall be reviewed by the expert member from WII.

In view of above, the committee decided that a site visit may be undertaken by a sub-group comprising of Prof. C.R. Babu, Shri T.K. Dhar, Shri N.K. Verma and a representative of MoEF after the submission of all relevant documents as sought above. Accordingly, the proposal was deferred.

2.3 2x20 MW Imported Coal Based Captive Thermal Power Plant of M/s MCC PTA India Corpn. Pvt. Ltd. at village Bhumaraichak, Tehsil Sutarehata, Town Haldia, District Purba Midnapore, in West Bengal-reg. Reconsideration for Environmental Clearance.

The proposal was earlier discussed in the 74th Meeting of the EAC held on May 20-21, 2013, which is extracted as under:

“The proposal is for consideration for environmental clearance. The project proponent made a presentation along with its consultant M/s Envirotech East Pvt. Ltd. and provided the following information:

The project proponent stated that the present proposal is for imported coal as interim arrangement until firm domestic coal is made available. That while impact assessment has been studied, the option of both domestic and imported and blended coal has also been carried out.

The proposal is for replacement of Furnace Oil based by Coal as fuel for a CPP 2x20MW at village Bhumaraichak, Tehsil Sutahata, Town Haldia, District Purba Midnapore, in West Bengal. Existing CPP has two units Phase-I (25 MW) which are DG Sets 5x5 MW and 1x 0.5 MW Black-start DEG and Phase-II (4x6 MW) i.e. 24 MW DG sets. The replacement of Furnace Oil Based CPP by Coal Based CPP is required due to likely non-availability of furnace oil from IOCL, BPCL after 2013 as the refineries are slowly shifting to lighter distillate. Besides it will have a better improvement in environmental quality over Furnace Oil. The land required for CPP will be 20 acres, which is available within 324.08 acres of the existing chemical plant premises of the company. The co-ordinates of the site are located within Latitude 22^o04'40.68" N to 22^o05'23.67" N and Longitude 88^o09'35.14" E to 88^o10'32.96" E. Imported coal requirement will be 0.18 MTPA. MoU for imported coal supply have been signed with M/s Anand Carbo Pvt. Ltd. Ash and sulphur contents in imported coal will be 8% and 0.5% respectively. Gross Calorific value of the coal will be 6000 kcal/kg. About 11,361 TPA of fly ash and 2,840 TPA of bottom ash will be generated. MoU for ash utilization have been signed with M/s Marshall Corporation Ltd. and M/s Green Concretex Cement Pvt. Ltd. Ash pond area will be 4acres only for emergency ash storage and will be provided with proper lining system to prevent leaching. The co-ordinates of the ash pond site is located within Latitude 22^o05'4.39" N to 22^o05'10.31" N and Longitude 88^o09'56.63" E to 88^o10'2.97" E. Two Single-flue Stacks of 72m of height will be provided. Water requirement of 3108m³/day will be sourced from the existing plant reservoir, which receives it from Haldia Development Authority (HAD), through existing pipeline at a distance of about 24 km from the project site. Water cooled condenser will be installed for cooling system. There are no National Parks, Wildlife Sanctuaries, Heritage Sites, Tiger/Biosphere reserves etc. within ten km of the project site. Public Hearing was held on 25.02.2013. Cost of the project will be Rs.195.62 Crores.

M/s MCC PTA India Corpn. Ltd. informed that they are the largest producer of Purified Terephthalic Acid (PTA) in India and is the largest financial investment by Mitsubishi Corpn. outside of Japan.

The Committee deliberated the issues raised in the Public Hearing and the responses made by the project proponent. The major issues raised were regarding impact on air pollution due to flyash loading and transportation through roads by dumpers, measures adopted to control the emission of NO_x and SO₂ from the activity etc. The project proponent informed that there were no litigation pending pertaining to the power project.

The Committee noted that the baseline AAQ Data provided is for the period during October-December, 2011, whereas TOR was prescribed only on 08.10.2012. The project proponent clarified that they had applied for TOR way back in July, 2011 and the Committee had recommended TOR in its 30th Meeting held during August 8-9, 2011, but the Ministry could issue TOR only in October, 2012.

The Committee noted the submission of the project proponent and agreed that the baseline AAQ can be considered subject to collection of one more appropriate season data and revised impact assessment carried out. It was also observed that while collecting AAQ data, the project proponent shall ensure collection of metrological, water quality and soil data also. That subsequently cumulative impact assessment shall be carried out taking into consideration all sources of pollution in the study area. That accordingly the EIA need to be revised or an addendum to EIA submitted.

The Committee observed that the MoU for imported coal is highly improper and inadequate for consideration as firm coal linkage. It was further observed that as firm coal and water availability is a primary requirement for consideration for appraisal for an environmental clearance the present proposal is premature for consideration.

The project proponent stated that imported coal will be brought through Haldia Port, which is located at about 12 kms from the project site. That the coal will be transported by trucks.

The Committee observed that the issues of impact due to coal transportation by road does not seem to have been appropriately addressed. It was observed that the incremental increase in ambient air pollution due to road transportation need a detailed assessment and either the EIA Report need a revision or an addendum to the EIA submitted. While doing so it was observed that the traffic density and the capability of road for handling additional trucks for coal transportation need to be explicitly explained.

The Committee further observed that only mechanically covered compact trucks shall be used for road transportation and the project proponent shall submit details of such mechanically trucks to be deployed submitted along with photographs. It was observed that no tarpaulin covered trucks carrying coal shall be permitted to pass through an area whose AAQ is critically polluted.

The project proponent informed that cooling water blow down will be entirely re-used. On the issue of brine from R.O System, the Committee observed that the project proponent shall ensure that these are disposed of by tying up with TSDF. That accordingly a detailed action plan shall be submitted.

The Committee agreed that since moratorium is still in existence in the area and as the consideration for taking up the case is on account of purportedly keeping the bilateral interest between Japan and India, the project proponent need to first establish that the proposed change is more environmentally better than the existing. That accordingly a detailed analysis separately shall be prepared and submitted.

In view of the shortcomings noted above the Committee observed that the present proposal is pre-mature for recommendation of environmental clearance in its present form. Accordingly the proposal was deferred. It was also decided that since the above exercise will take some time, the proposal may be delisted from the pending list for environmental clearance.”

On submission of the information sought, the matter was again placed before the EAC for its re-consideration.

The committee noted that MoU for imported coal has since been revised and a copy of the same was submitted. It was also observed that baseline AAQ data was collected during the period December 2012-February 2013 and cumulative impact assessment was carried out. On the issue of coal transportation and its impact on air quality, it was noted that only 33 additional mechanically covered trucks over the existing volume of traffic will be added and no significant impact is envisaged along the route of transportation.

Based on the information and clarifications provided, the Committee *recommended the project for environmental clearance* subject to stipulation of the following specific conditions:

- i) Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation shall be submitted periodically.
- ii) Feasibility of removal of dissolved phosphate from brine shall be explored and report submitted to the Regional Office of the Ministry.
- iii) A stack of 60 m height shall be provided with continuous online monitoring equipments for SO_x, NO_x and PM_{2.5} & PM₁₀. Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.

- iv) One of the AAQ monitoring Station shall be installed in the down wind direction i.e. across the river during the whole life of operation of the plant.
- v) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm³. Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.
- vi) Only mechanically covered trucks shall be used for the transportation of coal.
- vii) Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.
- viii) A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises
- ix) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.
- x) Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.
- xi) Long term study for radio activity and heavy metal in coal and fly ash, shall be carried out through institutes like AMD, Hyderabad, Central Power Research Institute, Bangalore, Mangalore University etc. and report submitted to R.O of the Ministry from time to time.
- xii) CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.
- xiii) An amount of Rs 1.0 Crores as one time investment shall be earmarked for activities to be taken up under CSR during construction phase of the Project. Recurring expenditure for CSR thereafter shall be Rs 0.20 Crores per annum till the life of the plant. Social Audit by a reputed University or an Institute shall be carried out annually and details to be submitted to MOEF besides putting it on Company's website.

- xiv) An Environmental Cell comprising of at least one expert in environmental science / engineering, occupational health and social scientist, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the head of the organization who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.

2.4 1x500 MW (Stage-III) Korba Super Thermal Power Plant of M/s NTPC Ltd. at District Korba in Chhattisgarh - reg. amendment in EC for additional ash disposal area.

M/s NTPC is operating Korba Super Thermal Power Project with a total capacity of 2600 MW in Jamnipalli in District Korba of Chattisgarh. The project has been commissioned in three stages viz. Stage-I: 3x200 MW (Commissioned during 1983-84); Stage-II: 3x500 MW (Commissioned during 1987-89); and Stage-III: 1x500 MW (Commissioned during 2011). Environmental clearances for various stages of Korba STPP were accorded by MOEF as follows:

- Korba STPP, Stage-I and II: Letter No. 10/1/1/76-Evn. Dated 22.3.77 from then Department of Science and Technology, Govt. of India (Copy enclosed at Annexure -I)
- Dhanras Ash Dyke for Stage-I and II: MOEF Letter No. : J-13012/2/93-IA-II dated 12.08.1993 (Copu enclosed at Annexure-III)
- Korba STPP, Stage-III: MOEF Letter No. J-13011/9/2006.IA-II(T) dated 31.08.2006 (Copy enclosed at Annexure-III)

M/s NTPC informed that in spite of being one of the oldest thermal power projects, with most of the units having completed its design life of 25 years, Korba STPS achieved a Plant Load Factor of 97.61% in financial year 2009-10 which was the best in NTPC and second best in India in subsequent years also. That presently the project operated at PLF above national average PLF. NTPC has an ambitious plan for life extension of the existing units (stage-I and II) through a Mega R&M Project. Korba STPP has acquired about 2009 acres of land, which includes 538 Ha. for main plant, 181 Ha for Township and 209 Ha for Merry Go Round System for transportation of coal (common for Stage-I, II and III). The break-up and status of utilization of land for ash disposal is as follows.

Stage	Name of Ash Dykes	Capacity and Status of Utilization
Stage-I&II	Charpata (456Ha.) + Dhanras (453Ha.)	Exisiting capacity is 87.24 M Cum., which has been almost exhausted.

Stage-III	Dhanras (172 Ha.)	The dyke is under construction
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From Korba STPP, Stage-I and Stage-II (2100 MW), about 5.34 Million Cubic Meter of ash is generated every year. However, ash utilization at Korba STPP is a challenging task in view of the following:

- There is stiff competition for ash utilization among various power station and steel plants in the area.
- Cement companies find it cheaper to take ash from sponge iron units of Raipur area and NTPC Plants at BHilai and Sipat.
- Further, cement plants have installed their own captive power stations, which also provide them fly ash.
- Being remote location, potential of large scale use of fly ash is low hindering ash utilization.
- No open cast mine has been allocated for ash filling purpose. One underground mine has been allocated for stowing with potential of one million MT of ash only. It is awaiting clearance from DGMS.
- There is no major road project in the nearby area, where ash can be used in large quantity.

It was also informed that due to above reasons, despite best efforts by NTPC, the ash utilization at Korba STPP is still below 100% only on sustainable basis, although in the past ash utilization has been encouraging due to avenues available for one time use. Korba STPP is facing the threat of closure due to lack of space for ash disposal despite being one of the best power stations in country providing cheap power to state/country.

That NTPC after a detailed survey of the surrounding area, has identified an area of about 1100 acres at village Kodyaghat located at about 15 km NNW of the project (aerial distance). That this area will generate an ash disposal capacity of 60 Million Cum (considering starter dyke + four raisings), sufficient for disposal of ash from Stage-I and II for about 15 years. However, as the proposed dyke is located at a considerable distance across the Hasdeo River, about 500 acres shall be required for ash pipeline corridor, booster pump house and bridge across river Hasdeo. The detailed break-up of the land proposed to be acquired is as follows:

S. No.	Land Category	Area Required	Status of Acquisition
1.	Private Land	314.66 Acres	Application submitted to State Investment Promotion Board on 29.11.2013
2.	Govt. (Revenue) Land	82.65 Acres	Application submitted to State Investment Promotion Board on 29.11.2012
3.	Revenue	1229.36	Application for Stage-I clearance

	Forest Land (Bade Jhhad ke Jungle)	Acres	submitted on 31.03.2011 and the same has already been forwarded by DFO, Korba to Conservator of Forests, Bilaspur vide letter dated 15.03.2012 (copies enclosed at Annexure-V & VI respectively).
	Total	1626.67 Acres	

It was also informed that vide its letter dated 15.03.2013, by the Divisional Forest Officer, Korba to the Conservator of Forests, Bilaspur, recommendation for diversion of forest land has been made stating the following:

1. The total forest land in orange category/ revenue forest involved is 497.716 Ha (1229.36 Acres).
2. The density of forest area proposed to be diverted is 0.3 and it contains the trees of Sal/ Bija/ Shisham.
3. The land proposed for diversion is minimum and no alternate non-forest land is available for the said purpose.
4. NOCs from the concerned village Panchayats have been obtained.
5. Plan for compensatory afforestation has already been prepared.
6. There is no area/ statue of historical importance in the vicinity of the area proposed for diversion.
7. The applicant has not violated any provisions of Forest Conservation Act, 1980 in the project.
8. The proposed area is not located within 10 km. of any ecologically sensitive area, biosphere reserve, natural lake, water body, tribal settlement, religious place etc.
9. The area proposed to be diverted is not part of any National park/ Wildlife Sanctuary and there is no reserve forest within 10 km. of the proposed area.

In view of the above, M/s NTPC has requested for additional ash disposal area at Village Kodiyaghat. The matter was placed before the Committee for its views.

The Committee noted that the Fly ash utilization achieved in the power plant is only about 37%. That since the existing units are not able to comply with the fly ash utilization notification, other avenues/options shall need to be explored for fly ash utilization before the request can be agreed. The Committee therefore declined to agree to the present request.

2.5 3x660 MW (Stage-I) and 2x500 MW (Stage-II) Sipat Super Thermal Power Project of M/s NTPC Ltd. at District Bilsapur in Chhattisgarh-reg. amendment in EC for change of source of coal

M/s NTPC is operating Sipat Super Thermal Power Project (Stage-I: 3x660 MW; Stage-II: 2x500 MW; Total Capacity: 2980 MW) in Bilsapur district of Chhattisgarh. Environmental clearance for Sipat STPP was accorded by MOEF vide letter dated 22.02.13.1999 for capacity of 2000 MW (4x500 MW). However, due to changes in configuration of the project from 4x500 MW to 3x660 MW, an amendment to environmental clearance was issued by MOEF vide dated 30.04.2002.

- Environmental clearance letter dated 22.02.1999 stipulates that Coal should be used @ 10 MT/year for Stage-I with sulphur content not exceeding 0.24%. the coal should be transported from Korba coalfields by captive MGR in closed wagons to avoid dust pollution.
- Environmental clearance letter dated 30.04.2002 stipulates that Coal linkage has been firmed up from Dipika mine block (Korba area) which will have a maximum sulphur content of 0.36%

South Eastern Coalfields Limited (SECL) have expressed constraints in supplying the coal to Sipat STPP, Stage-I from Dipika mine only and agree to supply coal from operating mines of SECL. While signing Memorandum of Understanding with NTPC for supply of coal to Sipat SECL have mentioned that, there shall not be any source specific commitment of supply. However, in case of Sipat Stage-I (Unit-I only), as per the condition incorporated in MOEF clearance letter dated 22.02.1999 read with 30.04.2002, supplies would be made from Dipika mine block of Korba coalfields till purchaser submits an amendment in MOEF clearance in this regard.

It is pertinent to mention here that the sulphur content of coal from operating mines of SECL varies from 0.27% to 0.40%, which is similar to the sulphur content specified in environmental clearance letter dated 30.04.2002.

M/s NTPC also informed that the coal transportation has been envisaged in BOBRN/ BOXN wagons of NTPC/ Indian railways, which are open wagons. It is a general practice in India to transport coal in open wagons with suitable measures for control of fugitive dust emissions. The same has been envisaged in Sipat STPP also.

In view of the above, M/s NTPC has requested the Ministry to amend the condition regarding coal linkage to facilitate signing of long term coal supply agreement with SECL.

Based on the information and clarifications provided, the Committee deferred the request made by M/s NTPC for change of source of coal and

desired that composition of the coal need to be submitted before a view is taken.

2.6 Expansion by addition of 2x660 MW coal based Thermal Power Plant of M/s Orissa Power Generation Corp. Ltd. at Jhasurguda district in Orissa- reg. amendment and extension of EC.

M/s Orissa Power Generation Corpn. Ltd. has requested the Ministry for amendment of two conditions in the environmental clearance accorded for their expansion power project of addition of 2x660 MW (Unit-3&4) at Jhasurguda Distt., in Orissa. M/s Orissa Power Generation Corpn. Ltd. has also requested for extension of validity of EC.

The amendments sought and the reasons stated are given as under:

Stipulated condition of EC	Information provided	Request of M/s OPGCL
<p>Clause (xii): Closed cycle cooling system with <i>natural draft</i> cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms.</p>	<p>It is already envisaged in the EIA report for induced draft cooling towers. It seems that natural draft cooling towers is inadvertently mentioned in the EC.</p>	<p>Use of <i>induced draft</i> cooling towers may kindly be permitted.</p>
<p>Clause (xviii): Storage facilities for auxiliary liquid fuel such as LDO and /HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.</p>	<p>Coal is the primary fuel and HFO/LDO is the secondary fuel which is used during start up and flame stabilisation only. Generally the Sulphur content of HFO and LDO being supplied by Oil companies is around 4.5% and 1.8% respectively. It seems that Sulphur content in the liquid fuel will not exceed 0.5% is inadvertently mentioned in the EC.</p>	<p>Sulphur content of liquid fuel not to exceed 0.5% may kindly be deleted.</p>

The request of M/s OPGCL was placed before the Committee for its views. The Committee noted that the request for amendment of Clause (xii)

above seem justified and can be agreed as it appears the same was already presented before the EAC earlier and is mentioned in the EIA Report. Regarding the second amendment sought, the Committee noted that start-up fuel is expected to be carried out with commercially available fuel (LSHS/LDO etc) and the sulphur content as commercially available can be agreed.

The Committee also recommended that few conditions which were earlier not stipulated in the environmental clearance but are relevant now such as the following may be also stipulated while issuing the amendment:

- a) A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter, mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.
- (b) Continuous monitoring for heavy metals in and around the existing ash pond area shall be immediately carried out by reputed institutes like IIT Kanpur.

Regarding extension of validity of EC, the Committee noted that, since the validity will expire in Feb, 2015, the PP may request MoEF, if required, only before 6 months from expiry.

2.7 2x660 MW Imported coal based Thermal Power Plant of M/s Visa Power Ltd. at Village Dumarpali and Deveri, in Taluk & Distt., Raigarh in Chhattisgarh – reg. Amendment of EC.

M/s Visa Power Ltd. (VPL) has requested the Ministry for amendment of the EC accorded for their 2x600 MW VISA Raigarh Thermal Power Project in the villages Devri and Dumarpali of Raigarh (District), Chhattisgarh on dated 23.08.2011 for reduction of the project from 780 to 637 acres.

M/s VPL has informed that they have not received allotment of 143 Acres of Govt. Land at Devri and Dumarpali villages. Therefore, it is proposed to relinquish 143 Acres Govt. Land and M/s VPL shall be able to accommodate the 2x600 MW thermal power plant within the remaining land (i.e. 780-143 = 637 acres). M/s VPL also informed that there is no change in the plant layout, the Main Plant, Chimney, Coal handling plant, Reservoir and the Switchyard etc. Though there is no change of the location of main plant including the Chimney, some changes in the facilities/buildings are envisaged as described below.

- CW piping, Cooling tower, CW Pump-house for unit 2 has to be relocated towards the western side of the TG Building.
- Ash Dyke for unit 1 is envisaged in the Western side of Mai Plant.

M/s VPL therefore requested the Ministry to change the plant boundary co-ordinates resulting from the reduction of the project area from 780 acres to 637 acres.

Total land for ash dyke has been identified as 200 Acres against the allocation of 250 Acres of ash dyke as per the EC. VPL has identified 210.2 Acres for developing the Green Belt (33% of total area of 637 Acres) of land all around the periphery of the plant boundary. An amount of Rs.6.39 Crores were already spent towards CSR activities against the allocation of Rs.24.6 Crores in consultation with various stakeholders including land oustees at Raigarh.

Based on the information and clarifications provided, the Committee recommended amendment in EC for reduction of the project area from 780 acres to 637 acres subject to stipulation of the following additional specific conditions:

1. Social Audit by a reputed University or an Institute shall be carried out annually and details to be submitted to MOEF besides putting it on Company's website.
2. Details of CSR activities shall be displayed on the website.
3. Latest EC conditions.

2.8 2x660 MW coal based Supercritical TPP of M/s Lanco Vidarbha Thermal Power Ltd. at village Mandva, in Wardha Taluk & District, in Maharashtra- *reg. review of Environmental Clearance in compliance to the order of High Court of Bombay.*

The proposal was earlier discussed in the 1st Meeting of the re-constituted EAC held on September 19-20, 2013, which is extracted as under:

"M/s Lanco Vidarbha Thermal Power Ltd. was accorded environmental clearance for its 2x660 MW Coal Based TPP at village Mandva, in Wardha Taluk & District, in Maharashtra on 24.02.2011.

A PIL was filed in the High Court of Bombay at Nagpur bearing PIL No. 78/2010 challenging the public hearing conducted by the Maharashtra Pollution Control Board on 17.09.2010. The PIL was disposed off on 18.11.2011 with directions to conduct a second public hearing. The extract of the order of the High Court is given as under:

- "1. By this petition, which if filed in public interest, the petitioners have challenged the public hearing conducted by Respondent no.3 – Regional Officer, Maharashtra Pollution Control Board (MPCB) under a notification issued under Rule 5 (3) of the Environment (Protection) Rules, 1986 for granting environment clearance to certain new projects or

activities covered by the said notification. The hearing, which is challenged, took place on 17.09.2010. According to the petitioners, since hearing was vitiated by ruckus since the Regional officer, MPCB did not hear all the villagers, who wanted to raise objections and even when the villagers wanted to object, could not express their objections since they were hustled out of the meeting and suppressed by officers of respondent no.6-Company from expressing themselves.

2. After this petition was filed on 22.12.2010, the Ministry of Environment and Forests (MoEF) granted Environmental Clearance on 24.02.2011 and the respondents acted on the Environmental Clearance and started developing the site for the purposes of setting up of the Coal Based Thermal Power Plant. Apparently, no stay was granted by this Court against the Environmental Clearance nor was any injunction granted by the Court restraining respondent no. 6 from carrying out construction.

3. According to Mr. Mandlekar, Learned counsel for the petitioners, hearing was vitiated on account of several facts, which are set out in paragraph 8 of the petition. In the grounds, it is contended that the hearing was conducted improperly, arbitrarily, unfairly; the respondents used muscle power against the poor villagers; the Police Officers present at the hearing openly threatened the villagers and directed not to speak against the project; adequate notices were not given in the newspapers and after hearing only 14 persons, the public hearing was abruptly closed after the goons hired by the respondents created ruckus and villagers were brutally beaten. A First Information Report was also lodged against an official of respondent no.6-Company. We are informed that subsequently trial has been compromised and settled by the complainant. According to the petitioners, majority of the people were against the project and public hearing was forced to close. The objections were not answered and no satisfactory answers were given. Neither the attendance register was maintained nor it was sent along with proceedings of the public hearing. Minutes of the public hearing were not prepared in Marathi nor were they read. Thus, according to the petitioners, the hearing was a farce. It has defeated the purpose of the said hearing and accordingly, Environmental Clearance granted by the MoEF in the hearing is also vitiated.

4. On behalf of respondent no.6-Company, there is a complete denial of the allegations. According to respondent no. 6- Company, they had no part to play in the grant of permission or otherwise to the villagers for speaking at the hearing and they did not obstruct any villager from speaking. The Regional officer of the MPCB, who conducted the hearing has stated that the hearing was done in accordance with law. Those who wanted to speak were allowed to speak. According to the MPCB, the Minutes of the proceedings were recorded and submitted to the MoEF for

consideration. The entire proceedings were videographed and sent to the MoEF and are still available for screening.

5. At this juncture, we would like to note that there is a serious dispute of ruckus at the hearing. It is not disputed that only 15 people spoke and about 190 written representations were submitted to the MPCB.

6. It is obvious from the circumstances of the case that there is a hue and cry raised about denial of opportunity of being heard to the villagers by MPCB. Having regard to the number of villagers who attended the meeting, it is indeed quite possible that there was ruckus at the meeting and that everybody, who wanted to have their say, could not express themselves. It is not disputed that a First Information Report was lodged regarding the ruckus at the meeting though it is equally not disputed that later on the matter has been settled before the Court and no one has been prosecuted. There is no doubt that the person who filed the First Information Report later on could not identify who injured him. This, however, clearly suggests that the public hearing was not peaceful and, in any case, was not marked by solemnity in which such a public hearing should be conducted.

7. We have no doubt that merely because the Rules do not contemplate a public hearing by a Court, there is no reason to assume that the hearing should not be held in an atmosphere of solemnity, where the grievance of the villagers can be taken into account and considered properly.

8. Without going further into the matter, we are of the view that the public hearing was not conducted as it should have been. Indeed, Mr. Bhat, learned counsel for respondent no.6, submitted that respondent no.6 has no objection if public hearing is conducted again so that the grievance of the villagers that they were not heard may be removed.

In the circumstances, we are not inclined to go through the videographed proceedings and are of the view that the public hearing should be conducted again.

9. Thus there is no manner of doubt that the order passed in pursuance of the public hearing which was not conducted properly is vulnerable. It may be noted that the Environmental Clearance contemplated by the Rules is not based solely on the objections at the public hearing. The Environment (Protection) Rules, 1986 provide that the Environmental Clearance may be granted on the basis of the report of the Project Appraisal Committee constituted by the Central Government after detailed scrutiny of the application for setting up project or initiating any activity. The Rules also contemplate taking into account all final

Environment Impact Assessment Reports and in addition, a report prepared on the outcome of public consultation including public hearing. While the public consultation is, by no means, a minor requirement is equally true that there are other factors on which such a clearance is based.

10. In the present case, the Environmental Clearance has been granted also on the basis of the other factors such as appraisal by the Expert Environment Appraisal Committee and the outcome of the public hearing, which we have seen was not conducted satisfactorily. The Environmental Clearance was granted on 24.02.2011 and has been acted upon by respondent no. 6.

11. In the circumstances, we are of the view that it would serve interest of justice if the impugned Environmental Clearance is allowed to stand pending the outcome of the public consultation at the public hearing proposed to be ordered by us. In other words, in the circumstances of the case, we are of the view that it would serve the interests of justice if a post decisional public hearing is given to the villagers, in accordance with rules. The Regional Officer, MPCB who conducts the public hearing shall ensure that the hearing takes place in an atmosphere of solemnity and seriousness so that it is effective. We are not impressed by submissions made on behalf of the MPCB that the Rules contemplate that the hearing should take place in the presence of all the villagers who have gathered. It may be recalled that in the meeting held in the present case, there were about 5000 villagers, who were present and it is hard to imagine the Regional Officer being capable of ensuring a quiet, peaceful and solemn hearing with such large numbers.

12. In the circumstances, we direct that the Regional Officer may, without denying access to any member of the public for the hearing, shall make an enclosure of an adequate area where the persons, who have given their names in advance as desirous of being heard, are called in the presence of other villagers. If necessary, the Regional Officer shall make arrangement for a public address system so that those who are gathered outside the enclosure, which we are informed have been like a pendal, may hear the proceedings.

The Regional officer shall ensure that there is a controlled entry into the smaller pendal where he actually conducts hearing while ensuring that those outside the pendal can follow the proceedings through public address system or video system and further that those outside the smaller enclosure can enter and sit in the pendal by turns.

The Regional Officer shall issue fresh public notice inviting objections and notifying the villagers that in addition if they wish that their

representatives, if any, be heard their names may be given at least 24 hours in advance and each objection is heard properly regarding his objection to the project.

13. Having regard to the circumstances of the case, we consider it appropriate to direct respondent no.2-Collector and respondent no.4-Superintendent of Police, Wardha to supervise the arrangements and remain present or depute some responsible officer to remain present during the hearing. As it was done before, the proceedings shall be videographed and report of the proceedings shall be countersigned by the Collector and the Superintendent of Police or their representatives.

15. Mr. Mandlekar, learned counsel for the petitioners, empathetically urged that in the circumstances of the case the Environmental Clearance should remain stayed for the reasons indicated earlier.

16. We are of the view that such a stay is not necessary to serve interest of justice. Mere building and construction activities which are going on at this stage cannot be said to have an adverse impact on the environment *per se* particularly since the commissioning of the power plant is long way off. Mr. Bhat, learned counsel for respondent no.6, states that the Power Plant is not due for commissioning before 2014. Therefore, in the meanwhile, there is sufficient time for conducting the public hearing and for respondent no.1 Ministry to review the environment clearance, if necessary, in accordance with law. It is also clear that the respondent no.1- Ministry would be entitled to review the earlier Environmental Clearance in toto or in part depending on the outcome of the public hearing.

Needless to say that any activity undertaken by respondent no.6 in pursuance of the impugned Environmental Clearance shall be at its own risk and subject to final outcome of the proceedings.

17. Mr. Mandlekar, learned counsel for the petitioners further states that the Project Appraisal Committee should be free to take a decision afresh after considering outcome of the public hearing. Needless to say that there is no restrictions on either Project Appraisal Committee or the Ministry or any other the authorities. They all are free to consider entire matter afresh, in accordance with law.

Rule made absolute in the above terms. No order as to costs”.

In compliance to the Order of the Hon’ble High Court the matter was placed before the EAC for necessary requirements.

The Committee noted that public hearing was re-conducted by the Maharashtra State Pollution Control Board (MSPCB) on 20.06.2012 and its proceedings submitted to the Ministry vide their letter dated 11.09.2012. The Ministry noted that the document received from the Maharashtra State Pollution Control Board is incomplete w.r.t. the proceedings of the public hearing. The same has since been made available now.

M/s Lanco Vidarbha Thermal Power Ltd. made a presentation on the compliance of the Order of the High Court and the action taken therein.

Representatives of the MSPCB was also present. The Regional Officer, MSPCB clarified that that the public hearing was conducted smoothly and in accordance with the provisions of EIA Notification 2006 and was concluded as per law.

The Committee was also shown randomly the video of public hearing of the re-conducted public hearing. It was noted that the video recordings of the public hearing comprises of 13 CDs as the proceedings started at 11.55 am till 1.05 am on 20.06.2012 to 21.06.2012 i.e more than 13 hours. The Committee also perused through the issues raised and the responses made by M/s Lanco Vidarbha Thermal Power Ltd.

The Committee noted that some of the replies made, which has relevance with the public issue at large need to be appropriately addresses for which an effective action plan is required to be formulated. *The Committee therefore decided that M/s Lanco Vidarbha Thermal Power Ltd. shall prepare an action plan for implementation with requisite details and submit the same at an early date and not later than one month's time. Thereafter the review can be again taken up on submission of the same. The matter was accordingly deferred.*"

On submission of the information sought, the matter was again placed before the EAC for its re-consideration.

The Committee noted that although the PP has submitted an action plan, it does not have any budgetary provisions. Hence, the action plan shall be accordingly revised and submitted for further consideration in the next EAC, if submitted.

2.9 2x300 MW coal based Thermal Power Project of M/s GVK Power (Goindwal Sahib) Ltd. at Goindwal Sahib, District Taran in Punjab -reg. Extension of validity of EC.

M/s GVK Power (Goindwal Sahib) Ltd. was accorded environmental clearance on 09.05.2008 for its 2x300 MW coal based Thermal Power Project at Goindwal Sahib, District Taran in Punjab. M/s GVK Power (Goindwal Sahib) Ltd. has informed that the 1st Unit and 2nd Unit scheduled to be commissioned

by May, 2013 and November, 2013 respectively have not been commissioned yet. M/s GVK Power (Goindwal Sahib) Ltd. has therefore requested for extension of validity of environmental clearance for One year only.

The request was placed before the Committee for its views.

The Committee noted that the project is in advance stage of implementation and no public interest will be served by denying the extension sought. The Committee therefore decided that the request for extension can be agreed in accordance with the provisions of EIA Notification, 2006. The Committee further recommended that additional conditions which were earlier not prescribed but relevant now may be stipulated while issuing the extension of validity.

2.10 2x700 MW Raipur Thermal Power Plant of M/s Nabha Power Ltd. at Village Nalaj, District Patiala in Punjab – reg. Extension of validity of EC.

M/s Nabha Power Ltd. (NPL) was accorded environmental clearance on 03.10.2008 for its 2x700 MW Raipur Thermal Power Plant at Village Nalaj, District Patiala in Punjab. M/s Nabha Power Ltd. has informed that Unit-1 of 2x700 MW will be commissioned sometime in December, 2013 and Unit-2 is under construction. M/s NPL has therefore requested for extension of validity of environmental clearance for two years only.

The request was placed before the Committee for its views.

The Committee noted that the project is in advance stage of implementation and no public interest will be served by denying the extension sought. The Committee therefore decided that the request for extension can be agreed in accordance with the provisions of EIA Notification, 2006. The Committee further recommended that additional conditions which were earlier not prescribed but relevant now may be stipulated while issuing the extension of validity.

2.11 2x500 MW coal based Thermal Power Plant Anpara D of M/s UP Rajya Vidyut Utpadan Nigam Ltd. at Village Anpara, District Sonbhadra in Uttar Pradesh – reg. Extension of validity of EC.

M/s UP Rajya Vidyut Utpadan Nigam Ltd. was accorded environmental clearance on **18.09.2007** for its 2x500 MW coal based Thermal Power Plant Anpara D at Village Anpara, District Sonbhadra in Uttar Pradesh. M/s UP Rajya Vidyut Utpadan Nigam Ltd. has informed that the project is being constructed on old abandoned ash filled pond and several transmission lines

were passing over the construction area. The shifting of these transmission lines took time. M/s UP Rajya Vidyut Utpadan Nigam Ltd. has also informed that the project is under final stages of completion to start electricity generation/ operation. M/s UP Rajya Vidyut Utpadan Nigam Ltd. has therefore requested for extension of validity of environmental clearance for one year only.

The request was placed before the Committee for its views.

The Committee noted that the project is in advance stage of implementation and no public interest will be served by denying the extension sought. The Committee therefore decided that the request for extension can be agreed in accordance with the provisions of EIA Notification, 2006. The Committee further recommended that additional conditions which were earlier not prescribed but relevant now may be stipulated while issuing the extension of validity.

2.12 2x660 MW Super Critical Imported Coal Based Thermal Power Plant of M/s Universal Crescent Power Pvt. Ltd. at village Nayachar Island, District Purba Medinipur in West Bengal - reg. Discussion on report submitted by the Expert Committee constituted by West Bengal Govt.

The proposal was earlier discussed in the 1st Meeting of the re-constituted EAC held on September 19-20, 2013, which is extracted as under:

“The proposal was earlier considered in the 44th and 54th Meeting of EAC held during March 5-6, 2012 and August 6-7, 2012, wherein the project proponent gave a presentation and provided the following information:

The proposal is for setting up of 2x660MW Sagar Supercritical Imported Coal Based Thermal Power Plant at Nayachar Island, in District Purba Medinipur, in West Bengal. The power plant is proposed to be set up within West Bengal Petroleum Chemicals & Petroleum Investment Region (WBPCPIR) at Haldia. Land requirement will be 700 acres which is waste land. The co-ordinates of the site are located within Latitude 21^o59'14" N to 22^o00'36" N and Longitude 88^o06'08" E to 88^o07'27" E. Coal requirement will be 4.76 MTPA. Imported coal will be obtained from Indonesia (2.5MMTPA) and Australia (2.5MMTPA). Ash and sulphur contents in imported coal will be 5.5-9.0% and 0.6% respectively. About 0.344 MTPA of fly ash and 0.086 MTPA of bottom ash will be generated. Fly ash will be supplied to M/s Soham Overseas Pvt. Ltd., Kolkata who are in the business of Ash Export. Bi-flue Stacks of 275m shall be provided. Water requirement will be 117.21 Cusec which is saline water and will be sourced from Rangafalla Channel of Hoogly River through a pipeline at a distance of about 0.5 km from project site. Permission letter dated 20.02.2012 has been received from Irrigation & Waterways Department, Govt. of West Bengal for

drawl of raw surface water. No ash pond is proposed for the power project. 100% ash will be utilized from day one of operation of the plant by exporting it to Bangladesh. There are no National Parks, Wildlife Sanctuaries, Heritage Sites, Tiger/Biosphere reserves etc. within 10 km of the site. Public Hearing was held on 04.01.2012. Cost of the project will be Rs.8600.0 Crores. The project proponent had also informed that the baseline ambient air quality data was collected during December, 2010 to February, 2011.

In the 44th meeting, the Committee observed that there appeared mangroves in the vicinity of the area and information on the same was however not available with the proponent. The project proponent also informed that CRZ demarcation has been done and the project is not within CRZ area. The project proponent also informed that the West Bengal Govt. in November, 2011 has recommended three major industrial activities in this island viz. setting up of a power plant, industrial park and eco-tourism.

During the course of the deliberations, the Committee in the aforesaid 44th meeting noted that the island where the power project is being proposed appears to have a unique and fragile ecology with no habitation and felt that these important issues were inadvertently missed out while prescribing the TORs. The Committee also observed that the power project was reported by the power proponent to be a part of the WBPCPIR at Haldia, during discussions for TOR in 17th Meeting held during February 7-8, 2011 and accordingly agreed for recommendation of TOR. The project proponent has now informed during the current meeting that the WBPCPIR stands scrapped.

The Committee had also observed that prima facie the site did not appear suitable for setting up a thermal power plant in the ecologically fragile and sensitive area and accordingly decided a site visit need to be undertaken to assess the environmental sensitivity vis-à-vis setting up a thermal power plant in the pristine island. *It was therefore decided that a site inspection shall be carried out by a sub-group chaired by Dr. C.R. Babu and Sh. T.K. Dhar, Dr. KKS Bhatia, Shri J.L. Mehta as members along with a representative of the Ministry. The proposal was accordingly deferred for re-consideration at a later stage.*

The site visit was undertaken during April 10-12, 2012 and the report by the Sub-group was submitted to the EAC (Thermal Power).

The report was thereafter deliberated in 54th Meeting of EAC held during August 6-7, 2012 and Dr. C.R. Babu, Vice-Chairman, EAC and Chairman, of the Sub-Group presented the observations/ findings made during the site visit based on visual as well as documents made available to the sub-group. *The Committee accepted the report and agreed that based on the submissions made by the sub-group the site was not suitable for a power plant if the morphology of the island is to be preserved.*

The Principle Secretary, Department of Environment, Govt. of West Bengal along with the Secretary, Dept. of Industries, Govt. of West Bengal and the Resident Commissioner, Govt. of West Bengal at New Delhi were also present.

The Committee informed the representatives of M/s Universal Crescent Power Pvt. Ltd. and the Govt. of West Bengal officials to study the detailed report and take a conscious decision and revert back to the Committee with their views. The Committee also informed the project proponent that they might identify alternative site suitable for location of a thermal power plant and apply afresh which could be duly considered de-novo.

The Ministry thereafter received a report of the Committee constituted by the West Bengal Govt. refuting the report of the Sub-Group of the EAC that the site is not suitable for a thermal power project.

The report of the West Bengal Govt. circulated to the members earlier by the project proponent was placed before the EAC for its views.

A presentation was made by the Expert Committee purportedly constituted by the West Bengal Govt. to study the report of the Sub-Group of the EAC and furnish their views.

It was informed that contrary to the report of the Sub-Group of the EAC, the Expert Committee is of the opinion that Nayachar Island is a stable from morphological and other stability criteria and hence suitable for setting up of a thermal power plant.

Replies of the Expert Committee constituted by the West Bengal Govt. against major issues raised by the Sub-Group of the EAC in its report is summarized as under:

S.N	Observation of Sub-Group of EAC	Observations made by the Expert Committee constituted by West Bengal Govt.
1.	Nayachara Island is a unique and ecologically fragile island.	Our site inspection and records do not consider Nayachara island to be ecologically fragile. Scientific literature does not indicate records of corals, sea-grass and sand dunes, etc-features listed in the CRZ 2011 notification as critical habitats. There are also no reports of unique fauna, endemic to Nayachara Island.

		<p>Mangroves in the Hugli estuary are largely confined to the manmade mangrove afforestation by KoPT on Nayachara Island. The MoEF site visit acknowledges that the mangroves have been planted by KoPT in the 1980s. Our inspection of the mangrove species on the island indicate largely shrub like mono-species mangrove plantations and halophytes, typically associated with afforestation programs of the past. These mangrove plantations were done by KoPT in 1990, under the tenure of late Dr. A.C. Roy, IAS, the then Chairman of KOPT.</p>
2.	<p>The CRZ demarcation is questionable and that the island is an intertidal shoal.</p>	<p>The CRZ demarcation has been questioned by citing data from the Sunanado Bandopadhyay's article which uses satellite based topography. MoEF has authorized seven scientific organizations in the country for CRZ demarcation. CRZ demarcation for Nayachara Island has been done in the past by two of the MoEF authorized agencies- NOIT and IESWM.</p> <p>The NIOT CRZ demarcation indicates that bathymetry/topography has been derived from the Kolkata Port Trust records.</p> <p>Annual surveys of bathymetry/topography are conducted by the KoPT. These surveys are used to navigate vessels to the Kolkata and Haldia Dock complex and thus need to be very accurate for the safety of the vessels. The SRTM data technique referred to in the site report and Sunando Bandhopadhyay's article lacks the precision and accuracy of the methods used by the KoPT hydrography surveyors and to the best of our knowledge, has not been adopted by any authorized agency in the country for demarcation of HTL, vulnerability etc.</p> <p>The site visit report of sub-group of MOEF states that the entire island is under CRZ, questioning thereby the accuracy of the CRZ demarcation by IESWM and the West Bengal State Coastal Zone Management Authority (WBSCZMA). It is felt that dismissal of the CRZ demarcation by an</p>

		authorized agency must have stronger scientific basis.
3.	The island is unstable and prone to geomorphological changes that would result in gradual disappearance of the island.	<p>All estuaries, rivers and coastlines are dynamic the scale varies from location to location. Till the 1960s, there was no overwhelming reason to control the geomorphologic changes in specific areas within the estuary below Diamond Harbour. With the development of the Haldia Dock complex in the 1960s-1970s, KoPT embarked on several structural measures to ensure depths in the navigation channels. These structures / measures include:</p> <ul style="list-style-type: none"> a) The spurs near Jiggerkhali to prevent bank erosion and siltation of the Balari bar region b) Spurs on the western side of Nayachara Island to divert flows towards the Haldia dock and jetties c) Northern guide wall on Nayachara Island to divert flows toward the Haldia dock and jetties d) Over 100 spurs/ groynes and long lengths of seawalls/ revetments to prevent bank erosion and to ensure that the trend of increasing flows in the Rangafalla channel and diminishing flows through Hadia channel is reversed. <p>The consequence o such engineering is that the dynamic nature of the estuary with respect to the shore lines or framework of the estuary has reduced, while the bathymetry changes in the channels continue.</p> <p>The shoal that developed into the Nayachara Island is seen in bathymetry records of KoPT since the 1830s. The Island has grown in size and continues to grow.</p> <p>In addition to the spatial growth of the island, the vertical growth of the island has been enhanced by the aquaculture areas, bounds for roads by Fishery Department, dykes by KoPT for dredge spoil disposal.</p>

		It is the committee's opinion that the island, similar to Sagar Island, is largely stable from a geomorphology perspective, while the local erosion along the eastern face and accretion on the western face cannot be construed to suggest that the entire island is unstable. The changes along the shore line are typically of regimes within riverine and estuarine environments.
4.	Development of the power plant would alter hydro-dynamical behavior of the estuary and cause geomorphological changes in the estuary.	<p>Impact on tidal Hydrodynamics</p> <p>As per the CRZ demarcation, the power plant will be built in non-CRZ area (As per the revised CZMP approved by the West Bengal Government), which would 100 +m from the high tide line and thus would be on dry land even during high tide. Thus, tidal hydraulics will not be affected by the power plant footprint.</p> <p>Assuming the contention that the entire island is within CRZ has merit and that tidal waters cover the island for 1-2 days in a year during equinoctial periods of August/September, it is noted that the power plant is located in the highest elevation area of the island. The consequent impact on the tidal prism of the Hugli prism will be miniscule and any significant impact on the hydraulic regime is unlikely.</p>

The Expert Committee constituted by the West Bengal Govt. recommended as follows:

- From a purview of all the materials put at the disposal of the committee, the expert committee is of the view that Nayachara is stable from morphological and other stability criteria and hence is suitable for undertaking industrial development including development of a coal fired thermal Power Plant.
- Since Nayachara Island is located in the estuarine zone of Hooghly River, the CRZ mapping demarcating CRZ-I, CRZ-II and no-CRZ (area outside CRZ), has been carried out by agencies which are approved by MOEF as per CRZ regulation. Thus from CRZ point of view the non-CRZ area of Nayachara Island need to be considered under the EIA notification 2006 for environmental clearance for industrial activities including development of a coal fired thermal Power Plant.

- The elevation of land for Industrial activities including development of a coal fired thermal Power Plant has to be raised by utilizing suitable material taking into account localized flooding combined with storm surge, tsunami, sea level rise due to climatic change & wind generated wave. However, when done above HTL, this should not be considered as reclamation. For permissible facilities like Jetty, Conveyors, Pipelines coming in CRZ Zone also the above principle will be followed while deciding about elevation of structures & equipments. Whatever structure is installed in CRZ, it should not effect drainage. Further the area has to be protected by suitable dykes & other protecting measures including proper drainage facilities taking into account flooding due to heavy rainfall or spillage over the dyke or bund. WAPCOS has done a study for this and given suitable recommendations.
 - The committee is against setting up any PCPIR or hazardous chemical industry in the Island but have no objection in setting up a coal fired thermal power plant and other industries by following all environmental control measures.
 - The committee agrees to setting up of a research & development centre for culture of true variety of mangroves & other similar flora & fauna to enhance the ecological environment of Nayachara Island. The intention is to utilize the natural resources available (such as tidal flows, large intertidal flats, etc) to develop a natural research area in the Island as sufficient land is available for the establishment of industries including coal fired thermal power plant as well as a natural lab. This initiative will also prove that the industries and natural lab can co-exist together.

In response Chairman, of the Sub-Group provided the following information by e-mail which is extracted as under:

A). As a Chairman of the subgroup constituted by the earlier EAC (T&C) to visit the site and assess the suitability of Nayachar Island for setting up of Sagar Super Thermal Power Project – Stage I (2x660 MW) by the Universal Crescent Power Pvt. Ltd., and a member of the reconstituted EAC (T&C), the following are my observations to the responses submitted and presented by the Expert Committee appointed by the Government of West Bengal on the stability of the Island, and CRZ and other ecological issues highlighted in the Report of the subgroup of EAC.

2.1 The ecological fragility and uniqueness cannot be assessed in terms of mangroves alone and uniqueness cannot be assessed by endemic and rare plant/animal species alone. The subgroup used these terms to connote the location of the island in the Hugly estuary i.e. in the mouth of estuary which is narrowed down from 50.8 km wide to 9.2 km wide and its ecological function in maintaining the dynamic morphological equilibrium of the estuary itself. The

Expert Committee is silent on the observations made in the Report of the subgroup. Further, the Island is evolving – erosion and deposition (sedimentation) and ecological succession have been continuously taking place.

2.2 The word “Reclamation” was used in the sense of ecological alteration brought out by KOPT and not in the sense of sea reclamation as explained by the Expert Committee. The word reclamation in ecology has wider connotation. Filling the site on the island against storm surge tidal wash is a part of reclamation of the estuarine island.

2.3 Nayachar is an evolving estuarine island, which splits the Hugli river into Rangafalla Channel and Haldia Channel, is undergoing bank erosion on the Rangafalla side and deposition on Haldia side. It may be noted that there was no tail portion of Nayachar Island in 2001 and it was observed only in 2007. At the tail portion and right bank of Naychar island a huge deposition has been identified which is very alarming for Haldia dock system.

The criss cross network of surface channels across the island (breadth and length wise) and tidal water entering into these channels make the island totally under CRZ. There might be small patches in the middle portion of the island which may not be subject to tidal washes.

2.4 The following is information given in the IRS Report prepared for selection of best sites for Ports in West Bengal.

(a) “Digital bathymetry model of the Estuary reveals several underwater characteristics, of these the most important ones are the formation of tail of Nayachar Island and formation of several bars in creek Canal”. This suggests the continuous process of erosion and deposition leading to loss of some structures and creation of new structures which regulate dynamic equilibrium of Hugly estuary.

(b) “The main block of sands and sholas are static in **Geographic sense** but they are at the same time, **highly mobile that is always shifting, changing their shape, size and orientation resulting constant swing of the channels**”.

(c) “There is also extensive erosion of the banks in the estuarine region and even some of the **entire islands got engulfed by the thrust of tides, currents and waters**”. Infact, there is a heavy bank erosion on the left bank of Nayachar island that makes it unstable.

(d) Infact, the Report identified south west part of Sagar and Namkhana as potential sites for development of new ports and **not Nayachar island**.

The above statements indicate that Nayachar is inherently unstable.

B). BMT Report on “Study on Hydraulic, sedimentation and navigation for the development of Industrial Park on Nayachar Island” by PCR Chemicals Pvt. Ltd., which was subsequently abandoned the project on Nayachar Island mentions following.

(a) “Braided channels in rivers and estuaries continue to evolve with deposition on the inner banks and erosion on the outer bank for curved channel”.

(b) “Occurrences of extreme events like cyclones that cause short term significant changes in bathymetry cannot be predicted with certainty in the long-term. This variability in the navigation channels has occurred continually since the inception of the Kolkata Port with or without manmade interventions. Hindsight also suggests that manmade interventions may **have provided the intended results in the near term and yet in long term, some of the consequences could not be predicted, given the inherent complexity of the system**”.

All these statements suggest that the Nayachar Island may not be a suitable site for location of Power Plants and associated infrastructure. Further, no estuarine island in the world has a Power Plant till to date.

2.5 The Expert Committee does not negate the statement made by the subgroup Report ---that North eastern part of the island has been subject to erosion for the last 40 years.

C). Haldia is a critically polluted area and the moratorium for location of polluting industries at Haldia is lifted recently. Addition of 2x660 MW in Stage I and future expansion in Stage 2 at Nayachar, which is separated by only a Haldia Channel from Haldia, may bring back Haldia as a critically polluted area. Whether cumulative impact assessment has been done for the present project need to be ascertained?

D). The project has not yet been appraised for CRZ.

The Committee observed that TOR for the TPP was agreed to as the TPP was reportedly linked to the PCBIR proposed to be set up at Haldia, which has since been scrapped. That it is now also learnt that tidal wave covers a large part of the island and for which no tidal data (tide guage information) has been provided.

The Committee also observed that the rebuttal by the Expert Committee constituted by the West Bengal Govt. only states that the island is not unique and not fragile ecologically without having carried out any such study. That records of fragility of the island need not necessarily be present. That

mangroves were reportedly grown by KOPT and surviving very well itself suggest that it is a habitat for mangrove as mangroves cannot be grown everywhere. That from ecological point of view the whole island itself need to be viewed as required to be preserved as CRZ.

A member of the Committee also noted that the Nayachar Island of 47 sq. km area (central length 16.86 km and width 4.34 km) has numerous creeks sited throughout entire stretch of island. The island has increased in area 2.5 times in last 44 years (1968 to 2012) with erosion of 6.76 sq km and accretion of 25.035 sq.km between 1973 to 2012. It is reported that from 1999, island is holding shape and appearing to be stable.

Therefore considering that the island is within the estuarine portion of Hooghly and not connected to the main land, its development plan should be eco friendly because of features as given in the report of the Expert Committee constituted by the West Bengal Govt.

The report of the Expert Committee constituted by the West Bengal Govt. indicates that major part of the area in island only gets water logged during heavy rain due to poor drainage facilities coupled with tidal blockage. In the proposed development for industrial activities, there will be change in land reuse & build up of levels in non- CRZ areas to sustain industrial activities and their protection against the effect of tide rise combined with wave rush, sea level fluctuations, storm surge, tsunami effect, etc. For permissible facilities like jetty, conveyors, pipeline coming in CRZ Zone also, the above principle will be followed while deciding about the elevation of structures & equipment. Whatever structure is installed in CRZ, it should not affect drainage. Final elevation will be based on analysis and design. Thus indicating that setting up of a power project will involve lot of filling.

The report of the Expert Committee constituted by the West Bengal Govt. is silent on the effect of mercury emission and toxic metal release from coal ash

The Committee also noted that as per the report of the Expert Committee constituted by the West Bengal Govt. Nayachar Island falls in estuarine zone of river Hooghly with land area as follows:

Total area	:	13, 000 acres
Under KoPT	:	1000.3 acres
Private land	:	72.6 acres
Area available with USE Group	:	11,927.1 acres
Under CRZ	:	7252.1 acres
Balance under non CRZ	:	7252.1 acres

The elevation of land for industrial activities has to be raised by developing suitable material taking into account high tide level, storm surge, tsunami, sea level rise. The Nayachar Island has not been studied well in terms of hydro-biological, ecological and bio-resource potential. Nayachar Island can be considered as barren island in the core region but on the fringe and water front areas revealed a promising floral and faunal assemblages. The Nayachar island can be developed as a model island ecosystem. Island being bordered with micro-tidal estuary the abandoned ponds can be revived for fish culture practice. Nayachar island can become a hub for mangrove development, culture of food fishes and culture of ornamental fishes. There will be raising of ground Elevation through dredging of the existing channel in the estuary.

There is an agreement with land broker for purchase of land for bottom ash disposal/utilisation, for acquiring land from private owners in 24-Parganas District, in West Bengal.

The report of the Expert Committee constituted by the West Bengal Govt. is silent on impact due to storage of flyash during rainy season and leaching out of toxic metal and mercury emission from coal combustion (Indonesian coal is expected to contain 0.5 ppm Hg per kg) has not been covered for the purpose of impact assessment and effect on fish and other fauna.

Further the report of the Expert Committee constituted by the West Bengal Govt. mentions that about 2.5 m to 3 m filling would be necessary to attain a workable level. That an area of around 700 acres of land is identified on the northern side of the island for locating power station. The plot is government land and contains certain small fishing ponds. These ponds are protected by dykes to avoid ingress of water from river. Development of flood protection dyke and land filling of the project area need to be initially done by dredging material from river bed and a workable level upto 8.0/8.8 m above CD with 2.5 m high dyke all around and with proper drainage is to be developed.

The Committee noted that the Nayachar Island is not connected by road or rail to mainland. If disaster occurs at the time of cyclone etc. the assistance from main land will be restricted. Such a heavy industrial activity involving use of coal and generation of electricity and transmission thereof, the connectivity with main land is essential, so as to facilitate Govt. machinery to function for disaster management.

In view of the above, the Committee decided that the acceptability of the site as suitable for setting up of a thermal power project needs further deliberation and can be taken up only after adequate information as noted above are available.”

The PP vide letter dated 28.10.2013, submitted detailed clarifications justifying the suitability of Nayachar Island for location of the TPP. The matter was accordingly taken up and the PP along with West Bengal Govt. Expert

Committee made a presentation and re-iterated the justifications provided earlier.

The committee deliberated the submissions made and noted that the following information/study reports shall be provided, preferably within three months before a decision is made:

1. Verification that the project site is located in non-CRZ area, taking into account the natural drainage pattern of the island.
2. Effect of alteration in the morphology of the island due to the power plant on the dynamic equilibrium of the Hugli estuary.
3. Hydro dynamic study by a reputed institute such as CWPRS, Pune/IIT, Roorkee to assess the stability of the island and safety of the TPP.
4. Chemical, biological and ecological aspects of the island and its surrounding environment studies by a reputed institute such as NIO/ Annamalai University
5. Disaster management studies and plan in consultation with NDMA
6. Cumulative impact assessment and the impact on critically polluted area of Haldia.
7. Short term and long term plans along with MoUs/agreements for 100% fly ash utilization
8. Details of all the court cases pending against the project.

19.11.2013

2.13 18 MW co-generation Power Plant of M/s Simbhaoli Power Pvt. Ltd. at village Chilwaria, District Bahraich, Uttar Pradesh –reg. TOR.

The proposal was considered for determination of Terms of Reference (TOR) for undertaking EIA/EMP study as per the provisions of EIA Notification, 2006. The project proponent gave a presentation and provided the following information:

The proposal is for setting up of 18 MW co-generation Power Plant at village Chilwaria, District Bahraich, Uttar Pradesh. No additional land is required for the power project and will be constructed within the existing premises of sugar plant. The co-ordinates of the site are located at Latitude 27°30'37.55" N and Longitude 81°41'12.92" E. Baggasse requirement will be 853 TPD. Water requirement of 800 m³/day will be sourced from Ground Water via tube well. There are no National Parks, Wildlife Sanctuaries, Heritage Sites, Tiger/Biosphere reserves etc. within 10 km of the project site. Project cost will be Rs 97.68 crores. 2% of the project cost is earmarked for CSR activities.

Based on the information provided and presentation made, the Committee recommended the standard TORs (as applicable) at **Annexure-A1** for undertaking detailed EIA study and preparation of EMP along with the specific TOR as under:

- i) Permission letter for water drawl from the Competent Authority shall be submitted.
- ii) No coal and woody biomass shall be used.

2.14 20 MW co-generation Power Plant of M/s Simbhaoli Power Pvt. Ltd. at village Simbhaoli, District Hapur, Uttar Pradesh –reg. TOR.

The proposal was considered for determination of Terms of Reference (TOR) for undertaking EIA/EMP study as per the provisions of EIA Notification, 2006. The project proponent gave a presentation and provided the following information:

The proposal is for setting up of 20 MW co-generation Power Plant at village Simbhaoli, District Hapur, Uttar Pradesh. No additional land is required for the power project, power plant will be constructed within the existing premises of sugar plant. The co-ordinates of the site are located at Latitude 28°45'51.56" N and Longitude 77°59'19.94" E. Baggasse requirement will be 815 TPD. Water requirement of 884 m³/day will be sourced from Ground Water via tube well. There are no National Parks, Wildlife Sanctuaries, Heritage Sites, Tiger/Biosphere reserves etc. within 10 km of the project site. Project cost will be Rs 113.90 crores.2% of the project cost is earmarked for CSR activities.

Based on the information provided and presentation made, the Committee recommended the standard TORs (as applicable) at **Annexure-A1** for undertaking detailed EIA study and preparation of EMP along with the specific TOR as under:

- i) Permission letter for water drawl from the Competent Authority shall be submitted.
- ii) No coal and woody biomass shall be used.

2.15 1x500 MW Extension Unit No.5 (Phase-III) of Sagardighi Thermal Power Project of M/s West Bengal Power Development Corpn. Ltd. in Murshidabad District, in West Bengal - reg. TOR.

The proposal was considered for determination of Terms of Reference (TOR) for undertaking EIA/EMP study as per the provisions of EIA Notification, 2006. The project proponent gave a presentation and provided the following information:

The proposal is for expansion by addition of 1x500 MW Unit No.5 (Phase-III) of Sagardighi Thermal Power Project in Murshidabad District, in West Bengal. Existing capacity of Sagardighi power plant is (Phase I: 2x300 MW and Phase II: 2x500 MW) 1600 MW. No Additional land is required for expansion. The co-ordinates of the site are located at Latitude 24°22'13.7" N and Longitude 88°06'15.8" E. Coal requirement will be 2.76 MTPA at 85% PLF. Coal will be sourced from Pachwara (N) coal Block. Water requirement of 43,200 KLD will be sourced from Bhagirathi River through a pipeline. There are no National Parks, Wildlife Sanctuaries, Heritage Sites, Tiger/Biosphere reserves etc. within 10 km of the project site.

The Committee noted that the certified compliance report from the MoEF R.O Bhubaneswar for the existing units granted EC including the status of the units under construction needs to be submitted by the PP. Hence, the proposal was deferred for submission of the same. The permission letter for water drawl from the Competent Authority shall also be submitted.

2.16 2x660 MW Coal Based Thermal Power Plant of M/s SNN Infra Power Projects Pvt. Ltd. at Vemavaram, in Thongandi Mandal, in East Godavari Distt., in Andhra Pradesh – reg. TOR.

Neither the project proponent nor its representatives were present in the meeting. The Committee therefore decided that the proposal be deferred.

2.17 2x660 MW coal based super critical pressure Power Plant of M/s Atlas Power India Ltd. near Village Kadechur, Taluk & District Yadgir in Karnataka – reg. TOR

The above proposal was considered by the EAC in its 74th meeting held during 20-21 May, 2013 for extension of validity of Terms of Reference (ToR), the minutes of which are extracted as under:

“M/s Atlas Power India Pvt. Ltd. was prescribed ToR for its 1320 MW coal based Thermal Power Plant at village Kadechur, Taluka & Distt. Yadgir, in Karnataka on 20.05.2009. M/s Atlas Power India Pvt. Ltd. has now informed that due to delay in water allocation and land allotment from the State Govt., final EIA/EMP report could not be submitted to the Ministry. M/s Atlas Power India Pvt. Ltd. has therefore requested the Ministry for extension of validity of TOR for one year.

The matter was placed before the Committee for its consideration.

The Committee noted that TOR was prescribed on 20.05.2009 and the project proponent is yet to get public hearing conducted, leave alone submit the final EIA Report to the Ministry for consideration of environmental clearance.

The Committee further noted that the Office Memorandum/Circular issued by the Ministry on 22.03.2010 states that , for cases where TOR has been issued prior to 22.03.2010, the EIA/EMP should be submitted after public consultation where so required, no later than four years from the grant of TORs, with primary data not older than three years.

In view of the policy decision taken at noted above, the Committee declined the request of M/s Atlas Power India Pvt. Ltd. and decided that M/s Atlas Power India Pvt. Ltd. shall apply afresh for TOR.”

The proponent had applied afresh for ToR and accordingly the proposal was considered for determination of ToR for undertaking EIA/EMP study as per the provisions of EIA Notification, 2006. The Committee noted that the Environmental Consultant, M/s Environment & Power Technologies Pvt. Ltd. does not have the QCI/NABET accreditation. However, it was noted that the Hon'ble High Court has given a stay and allowed the consultant to present before EAC.

The project proponent and the environmental consultant gave a presentation and provided the following information:

The proposal is for setting up a 1320 MW (2x660) coal based super critical pressure power plant near Village Kadechur, Taluk & District Yadgir in Karnataka. The project will be based on super critical technology. Total land requirement is estimated as 1130 acres. Total water requirement is 4500 m³/hr, which will be sourced from River Krishna. Coal requirement is estimated as 5.435 MTPA, which will be imported from Indonesia. An agreement was made with M/s Southdale Resources SDN.BHD, Malaysia. The coal specifications will be GCV-4000 Kcal/Kg, Sulphur-0.8% and ash content 8%. There are no National Parks, Wildlife Sanctuaries, Heritage Sites, Tiger/Biosphere reserves etc. within 10 km of the project site.

Based on the information provided and presentation made, the Committee recommended the standard TORs (as applicable) at **Annexure-A1** for undertaking detailed EIA study and preparation of EMP along with the specific TOR as under:

- 1) Permission letter for water drawl from the Competent Authority shall be submitted.

2.18 2x250 MW Coal Based Thermal Power Plant of M/s NMDC Power Ltd. (Gonda Power Project) at Village Turkadih, Tehsil Mankapur, Distt. Gonda, in Uttar Pradesh - reg. Reconsideration for TOR.

The proposal was earlier considered on 1st meeting of EAC held during September 19-20, 2013, the minutes of which are extracted as under:

“The proposal was considered for determination of Terms of Reference (TOR) for undertaking EIA/EMP study as per the provisions of EIA Notification, 2006. The project proponent gave a presentation along with its consultant M/s. MECON Ltd., Ranchi and provided the following information:

The proposal is for setting up of 2x250 MW Coal Based thermal power plant at village Yankapur, Distt. Gonda, in Uttar Pradesh. *It was informed that the present proposal is proposed to be implemented as a joint venture with M/s IL&FS Ltd.* Land requirement will be 600 acres which is an agricultural land. The co-ordinates of the site are located within Latitude 27°05'30" N to 27°06'37" N and Longitude 82°07'48" E to 82°09'44" E. Coal requirement will be 1.988 MTPA at 85 % PLF. Domestic coal will be sourced from Northern coal fields Ltd. (70%) and from Shahpur East and West coal blocks in M.P (30%). Water requirement will be 1800 m³/hr, which will be sourced from River Saryu through a pipeline at a distance of 35 km from the project site. There are two reserve forests namely Tikari RF and Randuara RF. There is no National Parks, Wildlife Sanctuaries, Heritage Sites, Tiger/Biosphere reserves etc. within ten km of the project site. There will be around 600 project affected families (PAFs).

The Committee noted that the project proponent have presented alternative sites which are itself not acceptable to themselves and have come up with justification for pushing through the chosen site. It was also noted trying to justify the present site as suitable for setting up of a TPP with no data on land use of the proposed site was certainly unacceptable.

The Committee further noted that Gonda District is known for fertile agricultural land and therefore advised the project proponent to explore alternative acceptable sites beyond Gonda. While doing so, they could seek help of NRSA if they felt it would help them.

In view of the above the proposal was deferred for re-consideration at a later stage and it was recommended that that the Ministry may de-list it from the pending list as exploration of alternative sites may take a long time.”

The PP vide letters dated 3.10.2013 and 15.10.2013 has informed MoEF that in view of the above minutes of the EAC meeting, the PP in consultation with their consultant M/s MECON have identified alternate sites within and outside Gonda, with the help of Topo Sheets/Satellite imageries and extensive field survey. It was requested to reconsider the proposal for ToR. The matter was accordingly placed before the EC for reconsideration for ToR.

It was informed that based on NRSA waste land map, alternative sites were identified spreading over a distance of 80 km in three districts of U.P. Subsequently site visits were conducted to study suitability of the identified lands for the proposed power plant. Based on environmental considerations, three sites were identified, i.e. two in Gonda District and one in Balarampur District.

Of the three sites, the site at Turkadih-Siswa is proposed based on the merits that here are no ecologically sensitive area within 10 km radius, no homestead land involved, minimum R&R issues and land grading required, land is above the highest flood level of the area, optimum area requirement, minimum rail corridor and possibility of utilization of waste lands nearby the site by relocation of ash pond. The total land requirement of the new proposed site will be 550 acres.

Based on the information provided and presentation made, the Committee recommended the standard TORs (as applicable) at **Annexure-A1** for undertaking detailed EIA study and preparation of EMP along with the additional specific TOR as under:

1. Water requirement shall be within the CEA norms/guidelines.
2. Permission letter for water drawl from the Competent Authority shall be submitted.
3. Local River should be undisturbed.

2.19 2x600 MW Singhitarai TPP of M/s Athena Chhattisgarh Power Ltd. at village Singhitarai, Dabhara Tehsil, Janjgir-Champa Distt., in Chhattisgarh - reg. reconsideration for Amendment in EC.

The proposal was discussed in the 60th Meeting of the EAC held during November 5-6, 2012, which is extracted as under:

“M/s Athena Chhattisgarh Power Ltd. was accorded environmental clearance for its 2x600 MW Singhitarai TPP at village Singhitarai, Dabhara Tehsil, Janjgir-Champa Distt., in Chhattisgarh on 04.06.2010.

M/s Athena Chhattisgarh Power Ltd.(M/s ACPL)requested the Ministry for increase in land required for the main plant area of the project from 850 acres to 871.475 acres excluding the 80 acres for external facilities. M/s ACPL has also requested that township will be developed at a new site in an area of 35.77 acres. That the total land required for the power project will be now 1043.43 acres in lieu of 930 acres mentioned in the environmental clearance accorded for the power project. It was also informed that out of additional 113.43 acres requested about 39 acres is forest land for which forestry clearance is required.

The Committee noted that the request cannot be viewed in isolation and the social and environmental implications need a detail deliberation. The details regarding use of common property resource such as grazing land, forests land etc. is unavailable and these need to be submitted with full facts.

The Committee therefore decided that the project proponent shall advertise in two local newspaper of highest circulation in local language and call for objections from stake holders on the issue and disclosing the necessity for the requirement of the additional 113.43 acres. It was further decided that after receipt of objections the matter be brought back to the Committee. Accordingly the request was deferred.”

M/s Athena Chhattisgarh Power Ltd. vide letter dated 19.08.2013 and 11.11.2013 had submitted reply/clarifications to above and the matter was again placed before the EAC for its re-consideration.

It was stated that the additional land requirement is 65.235 acres as against 113.43 acres which was requested earlier and includes 39 acres of revenue forest land, which is under process for forest clearance. The status of application for forest clearance of the revenue forest land is under process at the State Govt. level. Out of the 65.235 acres, 21.475 acres will be for power project to meet the CECB requirement for green belt and 43.76 acres will be for land outside the power project i.e. for providing roads, 25 m left on either side of the MDR, CSR and approach roads. The additional land is within the boundary of the land transferred for the project for which due process of public consultation as per the norms of Government of Chhattisgarh has been followed.

M/s Athena Chhattisgarh Power Ltd. has therefore requested for reprieve from the public notice earlier sought by the Committee in view of the information stated above.

M/s Athena Chhattisgarh Power Ltd. also additionally requested for permission for coal transportation by road (about 14 km) on a temporary basis for five years. It was informed that the requisite clearances to start the construction work for railway siding were obtained and the track linking works of in-plant yard are in progress. The power project is scheduled for commissioning in February, 2015 and railway siding is expected to be delayed.

Based on the information and clarifications provided, the Committee decided that the earlier decision for public notice can be exempted in view of the clarification now provided. The Committee also recommended for temporary road transportation of coal for a maximum period of three years and an additional project area of 65.235 acres, subject to forest clearance. It was decided to stipulate the following additional specific conditions:

- i. Only mechanically covered trucks shall be used for coal transportation over 14 kms distance specified.
- ii. Avenue plantation of 2/3 rows all along the road shall be carried out by the project proponent at its own expenses.
- iii. Periodic maintenance of the road shall be done by the project proponent at its own expenses and shall also facilitate the traffic control on the road.

2.20 Expansion of Captive Power Plant from 45 MW to 70 MW of M/s Binani Cement Ltd. at Binanigram, District Sirohi in Rajasthan- reg. Amendment of EC.

Environmental clearance for the above project was accorded by MoEF on 07.06.2007. The amendment in EC is requested for change in fuel mix i.e. from the existing imported coal: lignite ratio of 65:35 to proposed petcoke: imported coal/domestic coal/lignite ratio of 70:30. The justification given by the PP for the proposal is that petcoke has higher calorific value than coal leading to an approx. 42% fuel saving, the quantity of ash generation decreases by approx. 65% and since petcoke is a waste product from the petroleum refineries, its use as a fuel avoids the expensive cost of its safe disposal/treatment.

The committee noted that the information in Form-I needs to be revised and submitted. It was also noted that the SO₂ emissions are very high when petcoke is used as a fuel and sought the AAQ data of the TPPs running on Pet Coke. The details of solid waste utilization are also required. The Committee opined that use of petcoke as fuel in TPPs is very rare and wants to ascertain their environmental performance.

In view of above, the committee decided that a site visit may be undertaken by a sub-group comprising of Shri N.K. Verma, Shri G.S. Dang and a representative of MoEF after the submission of all relevant documents as sought above. The sub-group will also study some other TPP located nearby, which is already using pet-coke to some extent, for effect of using pet-coke on emission of SO₂ and other environmental issues. Accordingly, the proposal was deferred.

2.21 2x600 MW and 3x800 MW coal based TPP of M/s IL&FS Tamil Nadu Power Company Limited at Villages Kottatai, Ariyagosthi, Vilianallur & Silambimangalam, Chidambaran Taluk, District Cuddalore in Tamil Nadu- reg. Amendment of EC.

The proposal is for consideration for amendment of environmental clearance on three issues namely (i) change in the configuration of the units, (ii) flexibility in sulphur content in imported coal upto 0.8% as against 0.2% and (iii) relocation of ash pond area. The project proponent made a

presentation along with its consultant M/s L&T-RAMBØLL Consulting Engineers Limited, Hyderabad and provided the following information:

The above project was accorded EC and CRZ Clearance by MoEF on 31.05.2010 and 29.10.2010 respectively. The EC was challenged in the Hon'ble NGT which had directed carrying out a Rapid Cumulative Environmental Impact Assessment (RCEIA) study over a 25 Km radius. Based on the RCEIA study carried out by ITPCL, a Corrigendum to the EC was issued by MoEF with additional conditions on 14.08.2012.

The project proponent made a presentation on the requests made as follows:

- (i) The first request is for changing the capacity from 2X600 MW and 3X800 MW (totaling 3600 MW) to 2X600 MW and 3X660 MW (totaling 3180 MW) in view of easier availability of the 660 MW units, proven technology, as also availability of operating experience for such units. This would reduce the land requirement for the project from 1181 acres (falling within the 4 villages of Kottatai, Ariyagoshti, Villiyannalur and Silambimangalam) to 1128 acres (falling within the 3 villages of Kottatai, Ariyagoshti and Villiyannalur). In addition, the coal requirement for the project would reduce from 15 MT per annum to 13.4 MT per annum. The coal would be imported from Indonesian coal mines. The sea water requirement would reduce from 34,100 m³/hr to 33,000 m³/hr and the total marine discharge would also reduce from 25,886 m³/hr to 24,062 m³/hr.
- (ii) The second request is for flexibility in sulphur content upto 0.8% against the 0.2% stipulated at present. As FGDs are being installed, it would be possible for the plant to use coal with higher Sulphur content and yet to reduce the overall stack emission of SO₂ to be in compliance with the condition stipulated in the Corrigendum to the EC. In addition, due to the changed regulatory regime in Indonesia, the availability of coal with 0.2% Sulphur has become very limited and a relaxation up to 0.8% would ensure security of /sustainable coal supply for operation of Power Plant. With the use of FGD at 85% efficiency, the level of overall output SO₂ emissions will be equivalent to using Coal with 0.12% Sulphur without the FGD and will be well within the EC stipulation of 0.2% Sulphur in coal. The SO₂ emission levels per KWH would be well below the National and International averages for Thermal Power Plants. The coal supply from IL&FS coal mine in Indonesia, PT Bangun, would be continuing as per the original agreement. The Company has also entered into an additional agreement to ensure security of supply of Indonesian coal. It was confirmed that the Ash content of the coal would be within the current EC limits of 6%.

- (iii) The third request is for relocation of ash pond area. Some parcel of the earlier identified Ash Pond Site is classified as Water Body as per revenue records and ITPCL propose to relocate the ash pond to a nearby location which is 500 m to the East of the current location and is in the possession of the company. The proposed ash pond area is contiguous to the main plant and due to which, the Ash Pond area will be optimized and would reduce from 152 acres to 107 acres, while the greenbelt around the ash dyke would be increased from 90 acres to 129 acres. The proposed site is not having any water body and the distance from Buckingham canal would be around 1 km. The area would also lie outside the notified CRZ boundary.

The Committee deliberated and noted the requests of the PP regarding change in the capacity of TPP from 3x800 MW to 3x660 MW would result in to reduction in the impact on Air, Water (marine) and land environment in the area. It was also noted that sourcing of coal with 0.2% sulphur content may not be viable on long run and the PP is installing FGDs to minimize the SO₂ emissions. Further, the ash pond area is being reduced and the green belt is being increased due to the proposed relocation of ash pond area.

Based on the information and clarifications provided, the Committee recommended the above amendments regarding change in the configuration of the units, flexibility in sulphur content in imported coal upto 0.8% as against 0.2% and relocation of ash pond area. However, the Committee noted that import of coal has to be from a specific source for which MoA with supplier should be firm and should be produced for placement before EAC for record.

2.22 2x300 MW coal based Thermal Power Plant of M/s Vidarbha Industries Power Ltd. at Butibori MIDC Industrial Area, District Nagpur in Maharashtra - reg. Amendment of EC for temporary permission of road transportation of coal.

M/s Vidarbha Industries Power Ltd. (VIPL) has requested MoEF for permission for coal transportation by road for temporary period till February, 2014. The coal transportation is for its 2x300 MW TPP (Phase-I & II) at Butibori, in Nagpur Distt., in Maharashtra. Environmental clearances were issued on 09.05.2008 for 1x300 MW (Phase-I) and on 26.05.2010 for 1x300 MW (Phase-II).

M/s VIPL has informed that they have recently commissioned 2x300 MW Coal Based thermal power plant at Plot No. D-3 & D-3/Part, MIDC Industrial Area, Butibori, Nagpur. That one unit of 300 MW is in commercial operation since April, 2013 and the Consent to Operate (CTO) has been granted by Maharashtra State Pollution Control Board (MPCB) on 18th March 2013 for a

period of 6 months i.e. up to 31st August. 2013. However, while granting the Consent to Operate, MPCB has stipulated the following condition:

“The applicant shall get clarification from MoEF, GoI regarding relaxation of condition of rail transportation to the road transportation within next 4 month i.e. up to 15/7/2013”.

M/s VIPL has informed that the progress achieved in coal transportation system by Rail till date is as follows:

- (i) Out of the 16 Kms of the railway track, 95% of the track laying has been completed including 3 major and 50 minor bridges. 90 % of the track electrification works are completed. The major hurdle encountered in the railway line completion is the procedural delay in acquiring small stretch of land from SICOM (An undertaking of Govt. of Maharashtra). The length of corridor involved in this land is 700 m out of the total length of 16 km.
- (ii) Substantial progress has been achieved in processing of the proposal in various departments of the Govt. of Maharashtra (GoM) for transferring the land from SICOM to M/s VIPL. That the Law and Judiciary Department has cleared the proposal. A Committee of Principal Secretaries to GoM was constituted and deliberations have been completed. That the recommendations of this Committee will be put up to Secretary, Finance for vetting and thereafter after vetting from Finance Department, the proposal will be put up to Hon'ble Minister for Revenue, GoM for final approval.

M/s VIPL has informed that though they have been granted Consent to Operate (CTO) for 2x300 MW Units, they have Power Purchase agreement (PPA) for 134 MW only till April, 2014 and therefore operating only one unit of 300 MW with part load of 160 MW (including auxiliary power consumption) since April, 2013. That due to the stabilization problems, they could operate the plant at an average load of 112 MW with average daily coal consumption of 1882 MT which is less than 20% compared to 10,000 MT envisaged in the CTO.

It is further informed that so far they have transported 1.45 lac MT Coal in the last 4 months for running of the plant by purchasing coal through e-auction from Western Coal Fields Limited (WCL). Currently, WCL has only single option of offering e-auction coal by road transportation mode since last two years due to low availability of coal. Hence, they are forced to transport coal only by Road.

Based on the information and clarifications provided, the Committee recommended temporary permission for road transportation of coal for a maximum period of one year subject to stipulation of the following specific conditions:

1. Only mechanically covered trucks shall be used with a maximum of 400 trips/day.

2. Avenue plantation of 2/3 rows all along the road shall be carried out.
3. Periodic maintenance of the road shall be done and shall facilitate the traffic control on the road.

2.23 4x360 MW Thermal Power Project of M/s R.K.M Powergen Pvt. Ltd. at Uchpinda, Tehsil Dabara, District Janjgir Champa in Chhattisgarh – reg. Extension of validity of EC.

Environmental clearance M/s R.K.M Powergen Pvt. Ltd. for 4X350 MW TPP at the above location was accorded by MoEF on 26.8.2008 and an amendment for enhancement of capacity from 4X350 MW to 4X360 MW was accorded on 12.11.2008.

It was informed that out of the 900 acres, 814 acres was acquired and in-principle approval was obtained for the balance land Government acquisition. The construction was commenced in October, 2009. However, 16 months time was lost due to local disturbance. Basic and detailed engineering is completed and specification released for all packages. The equipments for all the four units have reached site and the four units will be commissioned between March – July, 2014. The details of construction of various equipment, green belt development and CSR activities along with pictures were also presented. The committee noted that the greenbelt development is not satisfactory and recommended that the PP shall accelerate the avenue plantation as per Indian Road Congress (IRC) guidelines.

Based on the information and clarifications provided, the Committee noted that the project is in advance stage of implementation and no public interest will be served by denying the extension sought. The Committee therefore decided that the request for extension can be agreed in accordance with the provisions of EIA Notification, 2006. The Committee further recommended that additional conditions which were earlier not prescribed but relevant now may be stipulated while issuing the extension of validity.

2.24 540 MW (4x135 MW) coal based Power Project of M/s Simhapuri Energy Ltd. at Thamminapatnam, District Nellore in Andhra Pradesh- reg. Extension of validity of EC.

Neither the project proponent nor its representatives were present in the meeting. The Committee therefore decided that the proposal be deferred.

2.25 2x660 MW coal based Thermal Power Plant of M/s Jindal India Thermal Power Ltd. at Village Derang, District Angul in Orissa- reg. Extension of validity of EC.

The project proponent requested to defer the proposal for next EAC meeting. Hence, the proposal was deferred for next EAC meeting.

2.26 3x250 MW (stage-I) Bongaigaon Thermal Power Project of M/s NTPC. Ltd. at Bongaigaon, District Kokrajhar in Assam- reg. Extension of validity of EC.

Environmental clearance for the above project was accorded on 07.06.2007. It was informed that the project being located in remote disturbed area, facing high rainfall, bad law and order situation and poor turnout of the contractors, the construction could not be completed within five years of the accord of EC. However, the units are under advance stage of construction/erection. The first unit is expected to be commissioned in July, 2014. Second and third units are expected to be commissioned by May and October, 2015 respectively. The cumulative expenditure on the project till August, 2013 was Rs. 4050 crores out of the total project cost of Rs. 4720 crores.

The Committee noted that an application for extension of validity of EC was submitted to MoEF only on 16.09.2013, whereas the validity has expired after 5 years i.e. on 06.06.2012. It was also noted that the revised Form-I was also not submitted along with the application which is mandatory as per the EIA Notification, 2006. The PP has expressed his sincere regret for the inadvertent delay and lapse for the above and promised that the same will not be repeated in future for all the NTPC projects. Revised Form-I was also submitted.

Based on the information and clarifications provided, the Committee noted that the project is in advance stage of implementation and no public interest will be served by denying the extension sought. The Committee therefore decided that the request for extension can be agreed in accordance with the provisions of EIA Notification, 2006. The Committee further recommended that additional conditions which were earlier not prescribed but relevant now may be stipulated while issuing the extension of validity.

2.27 2x660 MW coal based Thermal Power Plant of M/s. Cuddalore Powergen Corporation Ltd. near Thiyagavalli and Kudikadu villages, District Cuddalore in Tamil Nadu- reg. Extension of validity of EC.

Environmental clearance for the above project was accorded on 07.10.2008. It was informed that the land acquisition is still under progress. Out of the 445 ha of land required, 266.12 ha has been acquired, 41.03 ha is the land under exchange with Government and the balance private land to be acquired is 137.85 ha. Chemplast Samnar Ltd. has laid underground VCM pipelines in 2010-11 which passes through the proposed power plant site.

Governments of Tamil Nadu vide Order dated 20.9.2012 has ordered shifting of the pipeline in an alternative route. The power sector has witnessed slow down and with mounting NPAs. The banks and financial institutions are not keen to lend for power projects and hence financial closure is delayed. The project construction is scheduled to commence in March, 2014.

The Committee noted that the land acquisition has not been expedited by the PP.

Based on the information and clarifications provided, the Committee noted that although the project is unduly delayed, no public interest will be served by denying the extension sought. The Committee therefore decided that the request for extension can be agreed in accordance with the provisions of EIA Notification, 2006. The Committee further recommended that additional conditions which were earlier not prescribed but relevant now may be stipulated while issuing the extension of validity.

2.28 (i) 2x660 MW Rewa Thermal Power Project of M/s NHDC Ltd. at Khandwa Distt., Madhya Pradesh - reg. Extension of validity of TOR

1.28 (ii) Expansion by addition of 1050 MW (Stage-III), Phase-I Badarpur Combined Cycle Gas Based Thermal Power Plant of M/s NTPC Ltd at Badarpur Thermal Power Station, in New Delhi. - reg. Extension of validity of TOR

2.28 (iii) Expansion by addition of 1400 MW (Stage-II), Phase-I Badarpur Combined Cycle Gas Based Thermal Power Plant of M/s NTPC Ltd. at Auraiya village, in Etawah Distt. Uttar Pradesh - reg. Extension of validity of ToR

2.28 (iv) 2x300MW (600MW) CB TPP of M/s Creative Thermal Power Ltd. at Murka, distt. Chhitrakoot in Uttar Pradesh - reg. Extension of validity of ToR

2.28 (V) 2x660MW (Unit-I & II) Coal Based Thermal Power Project of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd. at village Phephar, Tehsil Banswara, Distt. Banswara in Rajasthan - reg. Extension of validity of ToR

2.28 (Vi) 5x800 MW (4000 MW) Super Critical Coal Based Thermal Power Plant and 60 MLD Desalination Plant of M/s Nana Layja Power Company Ltd. at village Layja Mota, in Mandvi Taluk, in Kutch Distt. in Gujarat - reg. Extension of validity of ToR

2.28 (Vii) 5x660 MW Coal Based Thermal Power Plant of M/s Kutch Power Generation Ltd. at Bhadreswar, in Mundra Taluk, in Kutch Distt., in Gujarat – reg. Extension of validity of ToR

The Committee noted that on the above matters a policy decision has already been taken by the Ministry vide its Office Memorandum dated 22.03.2010. The Committee therefore recommended that the above items may be considered purely in consonance with the applicability as contained in the aforesaid Office Memorandum.

There being no agenda item left, the meeting ended with a vote of thanks to the Chair.

ANNEXURE- A1

Terms of Reference (TOR):

- i) Vision document specifying prospective long term plan of the site, if any, shall be formulated and submitted.
- ii) Certified compliance report from the Regional Office of MoEF for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s), as applicable, shall be submitted.
- iii) Executive summary of the project indicating relevant details along with recent photographs of the approved site shall be provided. Response to the issues raised during Public Hearing and to the written representations (if any), along with a time bound Action Plan and budgetary allocations to address the same, shall be provided in a tabular form, against each action proposed.
- iv) Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and status of implementation shall be submitted to the Ministry.
- v) The coordinates of the approved site including location of ash pond shall be submitted along with topo sheet (1:50,000 scale) and confirmed GPS readings of plant boundary and NRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/river shall be specified, if the site is located in proximity to them.
- vi) Layout plan indicating break-up of plant area, ash pond, area for green belt, infrastructure, roads etc. shall be provided.
- vii) Land requirement for the project shall be optimized and in any case not more than what has been specified by CEA from time to time. Item wise break up of land requirement and revised layout (as modified by the EAC) shall be provided.
- viii) Present land use as per the revenue records (free of all encumbrances of the proposed site, shall be furnished. Information on land to be acquired) if any, for coal transportation system as well as for laying of pipeline including ROW shall be specifically stated.
- ix) The issues relating to land acquisition and R&R scheme with a time bound Action Plan should be formulated and clearly spelt out in the EIA report.
- x) Satellite imagery or authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest villages, creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided.
- xi) Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes / wildlife corridor, if any, within 10 km of the project site shall be specified and marked on the map duly authenticated by the Office of the Chief Wildlife Warden of the area concerned.

- xii) Topography of the study area supported by toposheet on 1:50,000 scale of Survey of India, along with a large scale map preferably of 1:25,000 scale and the specific information whether the site requires any filling shall be provided. In that case, details of filling, quantity of fill material required; its source, transportation etc. shall be submitted.
- xiii) A detailed study on land use pattern in the study area shall be carried out including identification of common property resources (such as grazing and community land, water resources etc.) available and Action Plan for its protection and management shall be formulated. If acquisition of grazing land is involved, it shall be ensured that an equal area of grazing land to be acquired is developed alternatively and details plan shall be submitted.
- xiv) A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on economically feasible mineable mineral deposit shall be submitted.
- xv) Details of 100% fly ash utilization plan as per latest fly ash Utilization Notification of GOI along with firm agreements / MoU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method / mechanism of bottom ash.
- xvi) Water requirement, calculated as per norms stipulated by CEA from time to time, shall be submitted along with water balance diagram. Details of water balance calculated shall take into account reuse and re-circulation of effluents which shall be explicitly specified.
- xvii) Water body/nallah (if any) passing across the site should not be disturbed as far as possible. In case any nallah / drain has to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area. Details of diversion required shall be furnished which shall be duly approved by the concerned department.
- xviii) It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc.
- xix) Hydro-geological study of the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted.
- xx) Detailed Studies on the impacts of the ecology including fisheries of the river/estuary/sea due to the proposed withdrawal of water / discharge of treated wastewater into the river/creek/ sea etc shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea.
- xxi) Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account inter-state shares (if any). Information on other competing sources downstream of the proposed

- project. Commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water.
- xxii) Detailed plan for carrying out rainwater harvesting and its proposed utilization in the plant shall be furnished.
 - xxiii) Feasibility of zero discharge concept shall be critically examined and its details submitted.
 - xxiv) Optimization of COC along with other water conservation measures in the project shall be specified.
 - xxv) Plan for recirculation of ash pond water and its implementation shall be submitted.
 - xxvi) Detailed plan for conducting monitoring of water quality regularly with proper maintenance of records shall be formulated. Detail of methodology and identification of monitoring points (between the plant and drainage in the direction of flow of surface / ground water) shall be submitted. It shall be ensured that parameter to be monitored also include heavy metals.
 - xxvii) Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out by a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of local communities.
 - xxviii) Action Plan for identification of local employable youth for training in skills, relevant to the project, for eventual employment in the project itself shall be formulated and numbers specified during construction & operation phases of the Project.
 - xxix) If the area has tribal population it shall be ensured that the rights of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land.
 - xxx) A detailed CSR plan along with activities wise break up of financial commitment shall be prepared. CSR component shall be identified considering need based assessment study. Sustainable income generating measures which can help in upliftment of poor section of society, which is consistent with the traditional skills of the people shall be identified. Separate budget for community development activities and income generating programmes shall be specified.
 - xxxi) While formulating CSR schemes it shall be ensured that an in-built monitoring mechanism for the schemes identified are in place and mechanism for conducting annual social audit from the nearest government institute of repute in the region shall be prepared. The project proponent shall also provide Action Plan for the status of implementation of the scheme from time to time and dovetail the same with any Govt. scheme(s). CSR details done in the past should be clearly spelt out in case of expansion projects.
 - xxxii) R&R plan, as applicable, shall be formulated wherein mechanism for protecting the rights and livelihood of the people in the region who are likely to be impacted, is taken into consideration. R&R plan shall be

formulated after a detailed census of population based on socio economic surveys who were dependant on land falling in the project, as well as, population who were dependant on land not owned by them.

- xxxiii) Assessment of occupational health as endemic diseases of environmental origin shall be carried out and Action Plan to mitigate the same shall be prepared.
- xxxiv) Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conducive environment shall be carried out and precautionary measures like use of personal equipments etc. shall be provided. Review of impact of various health measures undertaken at intervals of two years shall be conducted with an excellent follow up plan of action wherever required.
- xxxv) One complete season site specific meteorological and AAQ data (except monsoon season) as per MoEF Notification dated 16.11.2009 shall be collected and the dates of monitoring recorded. The parameters to be covered for AAQ shall include SPM, RSPM (PM10, PM2.5), SO₂, NO_x, Hg and O₃ (ground level). The location of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone, villages in the vicinity and sensitive receptors including reserved forests. There should be at least one monitoring station each in the upwind and in the pre - dominant downwind direction at a location where maximum ground level concentration is likely to occur.
- xxxvi) A list of industries existing and proposed in the study area shall be furnished.
- xxxvii) Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the Model used and the input data used for modeling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The wind roses should also be shown on the location map as well.
- xxxviii) Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.
- xxxix) Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.
- xl) Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished.
- xli) Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be

suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.

- xlvi) For proposals based on imported coal, inland transportation and port handling and rolling stocks /rail movement bottle necks shall be critically examined and details furnished.
- xlvi) Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished.
- xlvi) EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified.
- xlvi) A Disaster Management Plan (DMP) along with risk assessment study including fire and explosion issues due to storage and use of fuel should be carried out. It should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided.
- xlvi) The DMP so formulated shall include measures against likely Tsunami/Cyclones/Storm Surges/Earthquakes etc, as applicable. It shall be ensured that DMP consists of both on-site and off-site plan, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan shall be prepared both in English and local languages.
- xlvi) Detailed plan for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary (except in areas not possible) with tree density of 2000 to 2500 trees per ha with a good survival rate of about 80% shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports.
- xlvi) Over and above the green belt, as carbon sink, additional plantation shall be carried out in identified blocks of degraded forests, in close consultation with the District Forests Department. In pursuance to this the project proponent shall formulate time bound Action Plans along with financial allocation and shall submit status of implementation to the Ministry every six months.
- xlvi) Corporate Environment Policy

- a. Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

- b. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- c. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions. Details of this system may be given.
- d. Does the company has system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

All the above details should be adequately brought out in the EIA report and in the presentation to the Committee.

- 1) Details of litigation pending or otherwise with respect to project in any court, tribunal etc. shall invariably be furnished.

ANNEXURE- A2

Additional TOR for Coastal Based TPPs:

Over and above the TOR mentioned in **Annexure- A1**, the following shall be strictly followed (as applicable):

- a) Low lying areas fulfilling the definition wetland as per Ramsar Convention shall be identified and clearly demarcated w.r.t the proposed site.
- b) If the site includes or is located close to marshy areas and backwaters, these areas must be excluded from the site and the project boundary should be away from the CRZ line. Authenticated CRZ map from any of the authorized agency shall be submitted.
- c) The soil levelling should be minimum with no or minimal disturbance to the natural drainage of the area. If the minor canals (if any) have to be diverted, the design for diversion should be such that the diverted canals not only drains the plant area but also collect the volume of flood water from the surrounding areas and discharge into marshy areas/major canals that enter into creek. Major canals should not be altered but their bunds should be strengthened and desilted.
- d) Additional soil for leveling of the sites should be generated as far as possible within the sites, in a way that natural drainage system of the area is protected and improved
- e) Marshy areas which hold large quantities of flood water shall be identified and shall not be disturbed.
- f) No waste should be discharged into Creek, Canal systems, Backwaters, Marshy areas and seas without appropriate treatment. The outfall should be first treated in a guard pond (wherever feasible) and then discharged into deep sea (10 to 15 m depth). Similarly, the intake should be from deep sea to avoid aggregation of fish and in no case shall be from the estuarine zone. The brine that comes out from desalinization plants (if any) should not be discharged into sea without adequate dilution.
- g) Mangrove conservation and regeneration plan shall be formulated and Action Plan with details of time bound implementation shall be specified, if mangroves are present in study area.
- h) A common **Green Endowment Fund** should be created by the project proponents out of EMP budgets. The interest earned out of it should be used for the development and management of green cover of the area.
- i) Impact on fisheries at various socio economic level shall be assessed.
- j) An endowment of **Fishermen Welfare Fund** should be created out of CSR grants not only to enhance their quality of life through

creation of facilities for fish landing platforms / fishing harbour / cold storage, but also to provide relief in case of emergency situations such as missing of fishermen on duty due to rough seas, tropical cyclones and storms etc.

- k) Tsunami Emergency Management Plan shall be prepared and plan submitted prior to the commencement of construction work.
- l) There should not be any contamination of soil, ground and surface waters (canals & village pond) with sea water in and around the project sites. In other words necessary preventive measures for spillage from pipelines, such as lining of guard pond used for the treatment of outfall before discharging into the sea and surface RCC channels along the pipelines of outfall and intake should be adopted. This is just because the areas around the projects boundaries is fertile agricultural land used for paddy cultivation.
