

MINUTES OF THE 22nd MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE ON ENVIRONMENTAL IMPACT ASSESSMENT OF THERMAL POWER & COAL MINING PROJECTS

The 22nd Meeting of the reconstituted Expert Appraisal Committee (Thermal Power) was held on **25th & 26th September, 2014** at Narmada Meeting Hall, Jal wing, Ground floor, Indira Paryavaran Bhawan (new building), Jorbagh, New Delhi-110003. The members present were:

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|------------------------|---|---------------------------------|
| 1. Dr. C.R. Babu | - | Vice Chairman (Acting Chair) |
| 2. Shri T.K.Dhar | - | Member |
| 3. Shri J.L Mehta | - | Member |
| 4. Shri A.K. Bansal | - | Member |
| 5. Shri N.K. Verma | - | Member |
| 6. Shri G.S. Dang | - | Member |
| 7. Dr. S.D. Attri | - | Member (Representative of IMD) |
| 8. Dr. S.S. Bala | - | Member (Representative of CPCB) |
| 9. Shri N.S. Mondal | - | Member (Representative of CEA) |
| 10. Dr. Asha Rajvanshi | - | Member (Representative of WII) |
| 11. Dr. Saroj | - | Member Secretary |

In attendance: Dr. M. Ramesh, Scientist 'D', MoEF.

Dr. C.B.S Dutt (Representative of NRSA) and Dr. Ratnavel could not be present.

Item No.1: CONFIRMATION OF THE MINUTES OF THE LAST MEETING.

The Minutes of the 20th EAC meeting held during 28th-29th August, 2014 were confirmed with minor corrections.

Item No. 2: CONSIDERATION OF PROJECTS

2.1 Expansion by addition of 2x300 MW SLPP (Station-III) Power Project (Unit 5 & 6) at Village Nani Naroli, Taluka Mangrol, Distt. Surat, Gujarat by M/s Gujarat Industries Power Company Ltd.

1. The proposal was earlier discussed in the 1st Meeting of the EAC (Thermal) held during **September 19-20, 2013**, the minutes of which are as under:

Quote "The proposal is for consideration for environmental clearance. The project proponent made a presentation along with its consultant M/s Tata Consulting Engineers, Bangalore and M/s NEERI, Nagpur and provided following information:

The proposal is for expansion by addition of 2x300 MW Surat Lignite Power Plant (Station -III) at village Nani Naroli, Taluka Mangrol, Distt. Surat, Gujarat. Environmental Clearance for 2x125 MW (Station-I) SLPP was accorded on 26.05.1996 and for 2x125 MW (Station-II) SLPP environmental clearance was accorded on 10.11.2003. The land required for expansion will be 370 acres which is already available within the existing premises. The co-ordinates of the site will be located within Latitude 21024'08.653" N to 21024'31.903" N and Longitude 73006'37.834" E to 73007'19.025" E. Lignite requirement will be 3.75 MTPA. Lignite will be obtained from Mangrol-Valia Captive Mine for which mining lease was granted by Ministry of coal on 31.10.2001. Environmental clearance for the mine was granted on

21.07.2003. The expansion of production capacity of Mangrol-Valia Lignite Mine from 4.2 MTPA to 7.4 MTPA, mining lease application was recommended by Industries & Mines Department, Govt. of Gujarat and forwarded to MoC for prior approval on 20.04.2013 and TOR by MOEF was issued on 11.02.2012. Public hearing has been conducted for mine in Surat District on 02.04.2013 and in Bharuch district on 05.04.2013. Ash and sulphur contents in lignite will be 5-20% and 0.2-2.0% respectively. That sulphur content by using CFBC technology will be reduced to 0.6%. Lime required will be obtained from captive mine. Gross Calorific value of the lignite will be 2900 kcal/kg. Lignite crushing will be done at TPP site. About 0.75 MTPA of fly ash and 0.25 MTPA of bottom ash will be generated. Ash will be supplied for brick manufacturing, road construction etc. and if in case any quantity of flyash left out unutilized will be disposed after mixing with overburden into the captive lignite mines for voids filling. Water requirement of 50.016 MLD will be sourced from the Tapi river through a pipeline at a distance of about 18 km from the project site. HFL of Tapi River is at 25.5 m, located at about 12 kms from the project site. In principle clearance has already been obtained from Narmada water Resources Water Supply & Kalpsar Department, Govt. of Gujarat for drawl of water vide letter dated 29.09.2011. Natural 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 for the power project was held on 12.03.2013. Cost of the project will be Rs.4181 Crores.

M/s GIPCL submitted before the Committee that Bi-Flue stack of 263 m can be installed as AAI has objections for a 275 m stack. That accordingly impact assessment has also been carried out for 263 m stack height.

The Committee noted the request and agreed that based on the results of the exercises carried out for impact assessment, the request for 263 m can be agreed to.

It was also informed that transportation of lignite from mine to TPP site is through dedicated road and being carried out by PAPs only. That ash content in fly ash has gypsum (a binding material) and extensively used for brick manufacturing. The Committee noted that presently 95% of fly ash is being utilized.

A presentation was made on the compliance to the conditions of the existing power project followed by presentation of compliance of the TOR provisions.

The Committee discussed the issues raised in the public hearing and the responses made by project proponent. It was noted that the major issues raised were regarding arrangement for lignite transportation for the proposed plant; demand for flyash generated to be supplied to land losers and affected people only and flyash quota shall not be given to others; due to the proposed plant there is a possibility of adverse impact on the Environment, human and other live beings; solution for polluted water, likely to be generated from the proposed project; provision of medical services; women employment, growth and literacy etc.

In response to lignite transportation it was stated that transportation shall be done through dedicated road and option of conveyor belt system shall be explored. On the issue of adverse impact on environment due to proposed power plant, it was stated that CFBC technology will be employed using lime injection which will reduce SOx emission. That blow down water will be used for plantation and after R.O filtration will be used in plant. No polluted waste water will be discharged. With regard to community services it was stated that mobile medical van is being started for surrounding affected villages. For this a financial budget of Rs 25 lakhs for the year 2013-2014 has been made.

The Committee noted that the action plan being presented for implementation of issues raised in public hearing and others are very general in nature with no specific details. The Committee therefore decided that the project proponent shall revise its action plan for implementation of issues raised in public hearing and detailed CSR programme. While doing so it was decided that the project proponent shall indicate financial commitment made for activities planned.

It was further decided that details of CSR activities and audited financial expenditures incurred till date shall be submitted. The project proponent was also directed to get a social audit done in respect of CSR activities by a reputed institute in the region.

The Committee noted that the power plant is in existence for quite some years and has been carrying out mine void filling activity which is undesirable irrespective of existing legislation permitting mine void filling. The Committee therefore decided that the project proponent shall immediately prepare a suitable action plan for undertaking monitoring of ground water for heavy metals in and around mine voids where fly ash filling has taken place and also in and around the existing ash pond area. The Committee also recommended that the project proponent may take the services of reputed institutes who have the capability for undertaking such studies like IIMT, Bhubaneswar.

The Committee also noted that the project that transportation of lignite is being planned even for the expansion project only through dedicated road, which is not an environmentally sound proposition. The Committee therefore decided that the project proponent shall install closed conveyor belt system for transportation of lignite from the mine to the site (a distance of about 14.0 kms) and road transportation shall ceased with a period of three years.

On the issue of sustainable water availability, the Committee observed that even though the power project has water allocation from the Competent Authority, the analysis of impact on competing sources of water downstream of the project site need to be examined. It was therefore decided that the same shall be submitted based on flow data of the river for the last 40-50 years.

In view of the missing gaps of information the Committee decided that the proposal is premature for recommendation of environmental clearance. The Committee accordingly decided that the proposal be deferred and shall be taken up once information/study noted in the preceding paragraphs above are submitted." **Unquote.**

2. On submission of information by the PP for the above aspects, the matter was again placed before the EAC in the present meeting for its re-consideration, wherein the PP and their environmental consultant, M/s NEERI, Nagpur made a presentation. *After perusal of the presentation made and detailed discussion, the committee sought the following information and **deferred** the proposal.*

- (i) *As recommended earlier, need to explore setting up of closed conveyer belt for lignite transportation from mine to the TPP.*
- (ii) *Latest certified compliance report from the Regional Office of Ministry for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s), as applicable.*

(ii) Need to present the study under taken for monitoring of heavy metals in and around mine voids and also in and around the existing ash pond area. The presentation should be made by the concerned scientist of IIMT, Bhubaneswar.

2.2 2x660 MW coal based TPP at Villages Ghantbahal, Mohda, Bhalegaon, Tehsil Titlagarh, in Bolangir Distt. Orissa by M/s Sahara India Power Corporation Ltd. - Re-consideration

1. The proposal was earlier discussed in the 6th and 16th Meetings of the EAC (Thermal) held during **December 5-6, 2013 and July 1-2, 2014** respectively, the minutes of which are as under:-

Quote “The proposal is for setting up of 2x660 MW coal based TPP at Villages Ghantbahal, Mohda, Bhalegaon, Tehsil Titlagarh, District Bolangir, Orissa by M/s Sahara India Power Corporation Ltd. The project was accorded TOR for preparation of EIA/EMP report on 08.12.2009. The EIA / EMP report after conducting Public Hearing was submitted to the Ministry for consideration of environmental clearance. The Project Proponent (PP) along with their environmental consultant, M/s Anacon Laboratories Pvt. Ltd., Nagpur made a presentation and provided following information:

The total project area is 950 acres including ash pond area and township, which is being acquired through IDCO (Industrial Dev Corporation of Odisha, Govt. of Odisha agency) as per the MoU. Total Land in possession of the PP is 467.65 acres and the balance 482.35 acres is under various stages of acquisition & transfer. Full payment for Land made as per demands of IDCO by SIPCL over 800 acres. Out of 950 Acres, disputed/ held up land is 276.53 Acres, which is under litigation in the Hon’ble High Court of Odisha. The co-ordinates of the site are located within Latitude 20⁰12’24.20” N to 20⁰13’59.49” N and Longitude 83⁰10’51.10” E to 83⁰12’8.60” E. The total project cost is Rs. 8000 crores.

There are no National Parks, Wildlife Sanctuaries, Biosphere/Tiger Reserves, Heritage sites etc. within 10 km of the plant. There are two reserve forests in the study area viz. Baranai R.F at 4 km in the north east and Bazargarh R.F at 7.7 km in the east.

The Total water requirement is estimated to be 3580 m³/h, which will be met from River Tel. Water allocation for annual drawl of 53 Cusec from Tel River, which is at 1.5 Km from site was approved by 57th Water Allocation Committee on 22.05.2011. Central Ground Water Board (CGWB), New Delhi has given NOC for drawl of 500 m³/day water for construction purpose vide letter 7th January 2011.

Earlier at the time of TOR, it was proposed to procure domestic coal from Mahanadi Coalfields. However, it is now informed that due to non-availability of domestic coal linkage, it is proposed to use imported coal which would be sourced from Indonesia. The imported coal requirement is 4.6 MTPA. An MOU was signed with M/s Anshul Impex Pvt. Ltd., Nagpur on 27.08.2013 for import of 4.66 MMT Coal from Indonesia with 6-17% ash, GCV 5500 to 6000 Kcal/kg, sulphur < 0.8 %. The coal will be imported through Gangavaram Port, Vishakhapatnam where adequate port capacity is available. It has been confirmed by the port authority vide letter dated 11th Oct. 2013. Coal will be transported through existing network of Indian Railways from Gangavaram Sea Port up to the project site. An amount of Rs. 63.79 lakhs has been deposited with Railways on 14th Nov. 2012. M/s Aarvee Associates Architects Engineers & Consultants Pvt. Ltd. Bhubaneswar have completed Survey & layout of Railway

line from Sikiri Railway linking station (17 km estimated) from the site and DPR is under preparation & shortly it will be submitted to East Coast Railway. ECR letter of 16/08/2013 refers. Chimney Clearance approval will be obtained from Airport Authority of India (AAI).

Public Hearing/public consultation was conducted by the Orissa State Pollution Control Board held on 05.06.2012. It was noted that the issues raised in the Public Hearing include rise in temperature in the surrounding area due to the proposed project, scarcity in the drinking water supply, loss of agriculture due to emissions from the power plant, land acquisition and compensation, migration of labour, medical facilities and employment. The Committee discussed the issues raised in Public Hearing and the responses made by Project Proponent. *It was desired by the committee that a detailed action plan along with budgetary provision for all activities to be implemented in response to the issues raised in the Public Hearing need to be submitted.*

The committee noted that the MOU for sourcing imported coal was only signed on 27.08.2013, whereas the EIA/EMP report was prepared prior to it. Therefore, a detailed clarification was sought from the PP regarding the basis for the predictions on ambient air quality data etc. submitted in the EIA/EMP report. Further, it was also desired that PP should submit details on the coal requirement/annum vis-à-vis the MOU signed for the imported coal for long term. With regard to base line data, the committee noted that the exit velocity reported from stack is 71 m/s which is abnormally high and therefore needs to be relooked into and rework the AAQ predictions.

Further, the committee also sought the detailed hydrology of the area as the River Tel was in close vicinity i.e. about 1.5 km. distance. The PP shall ensure that the quantity of water drawl is within the CEA norms. The committee noted that PP has not submitted permission letter/assurance from Railways for the transportation of coal. This needs to be provided. It was also observed that the documents submitted were not in line with the presentation made on the CSR financial commitments. Hence, an action plan with time frame and budgetary provisions for capital CSR cost @ 0.4% of Project Cost during the construction phase indicating the activities and thereafter annual recurring CSR cost @ 0.08% of the Project Cost needs to be submitted.

*In view of the above short comings, the proposal was **deferred** for reconsideration after submission of all above documents.*

2. On submission of information by the PP for the above aspects, the matter was again placed before the EAC in the July, 2014 meeting for its re-consideration, wherein the PP and their environmental consultant made a presentation.

3. After perusal of the presentation made and detailed discussion, the committee sought the following information and **deferred** the proposal for re-consideration.

(i) Since the land issue lacks clarity and is still in dispute and subjudice, efforts shall be made to resolve the issues and progress made in this regard shall be submitted.

(ii) The ground and surface water data submitted by the PP shall be verified with the CWC data of the area.

(iii) Status of the proposed cement plant for fly ash utilization.

- (iv) Hydrology of the area shall be studied and report be submitted.
- (v) Three EIA reports were submitted to MoEF, hence, the report submitted for Public Hearing shall only be with MoEF and all others need to be withdrawn. Any additional information sought by EAC needs to be submitted only as an addendum.
- (vi) AAQ predictions of SO₂ need to be checked with the modified exit velocity and values of NO_x also appear on the lower side which needs to be checked.
- (vii) Response to the complaint received by the EAC/MoEF.
- (viii) Revised plant lay out with thick green belt all around the ash pond.” **Unquote.**

4. On submission of information by the PP for the above aspects, the matter was again placed before the EAC in the present meeting for its re-consideration, wherein the PP and their environmental consultant, M/s Anacon Laboratories Pvt. Ltd., Nagpur made a presentation. *The Committee noted that the issue regarding land acquisition for the project is under dispute and subjudice, the directions of the court need to be brought to the notice of the committee. Efforts shall be made to resolve the issues which could be presented before the committee. Further, the Committee also sought reply of the PP on the representation of ERC. The proposal was accordingly **deferred.***

2.3 Expansion of the Raichur TPP by addition of 800 MW (Super Critical) Coal Based Thermal Power Plant at Village Edlapur, in Raichur Distt., in Karnataka by M/s Karnataka Power Corporation Ltd – Re-consideration

1. The proposal was earlier discussed in the 58th Meeting of the EAC (Thermal) held during **November 10-11, 2009**, the minutes of which are as under:

Quote “The matter was placed for consideration for environmental clearance. A presentation was made by the M/s Karnataka Power Corporation Ltd. and provided the following information.

The proposal is for expansion of existing Edlapur Thermal Power Plant by setting up of additional 1x800 MW (Super Critical) Thermal Power Plant. The plant is located at village Edlapur, in Raichur Distt., in Karnataka. TOR for the project (earlier 600 MW) was prescribed on 18.08.2008 and amended for revised capacity (i.e 800 MW) on 30.03.2009. Land requirement will be 373 Acres. Coal requirement will be 2.92 MTPA at rate of 274 TPH (domestic coal) and 118 TPH (Imported coal) to be blended at ratio 70:30. Domestic Coal linkage is not available till date. KPCL therefore proposes to use coal from its captive coal block for 2 x 500 Bellary TPP or until the required domestic coal is available use imported coal. Water requirement 2939 m³/hr and will be sourced from Krishna River, which has been accorded by the state government for 3.60 TMC. COC of 5 will be adopted. No diversion of forest land will be involved. No additional land for ash pond will be required. A single flue stack of 275 m height with flue gas velocity of 25 m/s will be installed. No ground water will be tapped for the project activity. There are no wildlife sanctuaries, national parks, bios-sphere, tiger, elephant reserves; heritage sites etc within 10 km of the plant. Public hearing was conducted on 17.06.2009. Cost of the project will be Rs. 8806.23 Crores.

The Committee also discussed the issues raised in the public hearing and the response made by the project proponent. The main issues raised were regarding non implementation of Sri Nanjundappa's report for appointment and development; the high level of pollution already in Raichur area; setting up of IIT, Agricultural university; development of roads; employment of locals; 24 hours uninterrupted power supply to Raichur; non implementation of adequate compensation to land losers etc. The project proponent submitted its response to issues raised in public hearing and action plan for implementation of agreed issues. The project proponent also submitted that no litigation is pending in nay Court with respect to the project.

In view of the non-availability of firm coal linkage and no clarity on the source of fuel and its characteristics the Committee decided to defer decision in the matter.” Unquote.

2. The PP has informed the Ministry that MoC, GoI vide letter no. 13016/26/2004-CA-I (Pt.) dated 6th September 2013 has allocated 382 million tonnes of coal to KPCL in Deocha – Pachami Coal Block in West Bengal which has a total reserve of 2012 million tonnes. The blended coal 2.92 MTPA [Indigenous coal of 2.044 MTPA (70%) and imported coal is 0.876 MTPA (30%)] will be used for the proposed TPP. Edlapur TPS is proposed to be commissioned in 51 months from zero date. However, in case the supply of coal from the allocated coal block at Deocha-Pachami is not materialized, then the coal supplies for RTPS (coal linkage from MCL/WCL/SCCL) and BTPS (Integrated Baranj OCP coal mine at Chandrapur Dist. of Maharashtra in WCL area) and imported coal would be utilized. Coal would be transported by rail for the entire route from mines to power plant site. In view of above, the proposal was placed before the EAC.

3. At the outset, the committee noted that the proposal is an expansion of the Raichur TPP and not that of Edlapur. Hence, the proposal shall be termed as expansion of the Raichur TPP.

4. *After perusal of the presentation made and detailed discussion, the committee sought the following information and **deferred** the proposal for re-consideration.*

(i) *Certified compliance report from the Regional Office of Ministry with regard to the conditions stipulated in the environmental and CRZ clearances of the previous phase(s), as applicable.*

(ii) *Status of the EC/FC/Wildlife clearance for the Deocha – Pachami Coal Block.*

(iii) *Revised plant layout maintaining a required minimum distance of 500 m from the railway line.*

(iv) *Since the baseline data of the EIA/EMP report is more than 5 years old, fresh base line data shall be collected and draft EIA/EMP shall be accordingly prepared/amended based on the proposed coal characteristics and the latest ToR at **Annexure-A1**. The final EIA/EMP report shall be submitted to the Ministry after conducting fresh Public Hearing and addressing all the issues in the EIA/EMP report.*

(v) *Current status of the fly ash utilization of the existing TPP.*

(vi) Resolution from Board of Directors and Approval from MoC for diversion of coal from other TPPs to the proposed TPP.

(vii) Detailed Coal transportation plan.

2.4 3x660 MW North Karanpura Thermal Power Project near Tandwa in Chatra Distt., Jharkhand by M/s. NTPC Ltd.- reg. amendment of EC conditions.

1. EC was accorded for the above project on 29.11.2004 and revalidated on 19.02.2014. The PP made a presentation and sought amendment in conditions no. x-xiii, xvi, xxv, xxix, xxx, xxxv, xxxviii, xlii, xliii, xlv, xlvii, li and lviii.

2. After perusal of the presentation made and detailed discussion, the committee recommended for deletion of condition no. xi as it has been addressed vide condition no. xxxii. Further, condition no. xxxv shall also be deleted as ACC is proposed instead of WCC and the water requirement is addressed in condition no. xiii. However, the water requirement in condition no. xiii shall be 2,180 m³/h instead of 10,100 m³/h.

3. Regarding amendment in condition no. xxx, periodicity along with justification for monitoring of radio activity and heavy metal contents of coal and for all other conditions, for which amendments were sought, detailed justification shall be submitted for further consideration. The request was accordingly **deferred**.

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

1. EC was accorded for the above project on 08.05.2014. The PP made a presentation and sought amendment in specific condition no. xvii along with clarification on specific conditions no. xv, xvi, xix, xxiv and general conditions no. i & viii.

2. After perusal of the presentation made and detailed discussion, the committee recommended for deletion of specific condition no. xvii as Unit # 6 is already operational since 1990 and is based on once through condenser cooling system using sea water.

3. Regarding amendment/ clarification in specific condition no. xv, periodicity along with justification for monitoring of radio activity and heavy metal contents of coal and for other conditions, if any amendments are sought, detailed justification shall be submitted for further consideration. The request was accordingly **deferred**.

2.6 9x125 MW Captive Power Plant for the proposed Coal to Liquid (CTL) Plant of 80,000 BPD at Village Durgapur, District Angul, in Odisha by M/s Jindal Synfuels Limited. – reg. Extension of validity of ToR.

1. The proposal is for extension of validity of ToR accorded by MoEF on 20.09.2012 for the preparation of EIA/EMP report for the above project. The project proponent along with their environmental consultant, M/s. Vimta Labs Ltd, Hyderabad made a presentation requesting for the extension and provided the following information.

2. TOR for 80,000 Barrels per day (BPD) CTL has been granted on 11.01.2013. M/s Vimta Labs Ltd. has been engaged for EIA study for 80000 of CTL plant and 9 x 125 MW CPP.

Combined Field Monitoring for both the CTL and CPP has been done in the month of 1st October 2013 to 31st December 2013 representing post-monsoon season. All baseline data on environment, hydrology & socio economic data from secondary sources has been collected for the EIA study. SODAR based meteorological investigation of the site has been done for one month during Oct- Nov. 2013. Hydrogeological studies for the site of CTL and the CPP has been done during Nov. 2013.

3. The Wildlife Conservation Study (awarded on 02-11-2013), Area Drainage Study (awarded on 02-07-2013), Socio-Economic Study and Topographic Survey of the area are under progress.

4. *Based on the information and clarifications provided, the committee recommended the extension of validity of ToR by one year as per the policy of MoEF.*

2.7 1x660 MW Captive Power Plant (Coal based) at Geetapuram, Dolvi Village, Taluka-Pen, Raigad Distt. Maharashtra by M/s JSW Steel Ltd. – reg. ToR

1. The project proponent and their environmental consultant, M/s. MECON Limited, made a presentation and provided the following information.

2. The total land requirement is 150 acres of which the plant area, ash pond area and greenbelt area is 70, 30 and 50 acres respectively. There is no forest land involved in the project site. The corner coordinates of the project site are from Latitude 18°42'38.30" N to 18° 42' 55.98" N and Longitude 73°01'25.02" E to 73° 02' 7.38" E. There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves and Heritage sites within a radius of 10 Km from the site. Scattered Mangroves and Five Reserve Forests are located within 10 km radius. The project cost is about Rs. 4500 crores of which the environmental control measures cost is about Rs. 225 crores.

3. The proposed TPP will be based on super-critical technology. The coal requirement is 3 MTPA at 85% PLF with GCV of 5000 kcal/kg and will be imported from Australia/ South Africa/ Indonesia. The water requirement is 400 m³/h of raw water from River Amba and 7475 m³/h of sea water.

4. *After perusal of the presentation made and detailed discussion, the committee sought the following information and **deferred** the proposal for re-consideration.*

(i) Since no alternate site was proposed, minimum two proper alternate sites along with coordinates of all the sites on a toposheet shall be submitted.

(ii) CRZ map showing that the project site is outside the CRZ area.

(iii) Detailed water balance at source, the intake and outfall points etc.

2.8 Expansion project of 8 MW Power Plant within its existing premises at Village Nawagaon, O.P., West Singhum, Jharkhand by M/s Sai Sponge (India) Ltd. – reg. ToR

The PP did not attend the meeting and the proposal was **deferred**.

2.9 3960 MW Thermal Power Project in three phases (2x660 MW in each phase) at Villages Vempadu, Kagitha, DL Puram and Nellipudi, Nakkapalli Mandal, District Visakhapatnam, Andhra Pradesh by M/s Yeswanth Industrial Infrastructure Projects Pvt. Ltd. – reg. ToR

1. The project proponent made a presentation and provided the following information. ToR for the above proposal was accorded on 30.03.2011 and validity was extended upto 29.03.2014 on 04.09.2013. Due to the process of carving out a separate Telangana State from the erstwhile Andhra Pradesh, the land acquisition, Public Hearing etc. could not be completed within the validity period. Hence, the present proposal is for fresh ToR.
2. The total land requirement is 2563 acres of which the plant area, ash pond area and greenbelt area is 1380, 450 and 483 acres respectively. There is no forest land involved in the project site. There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves and Heritage sites within a radius of 10 Km from the site. The total project cost is about Rs. 18,270 crores.
3. The coal requirement is 4.53 MTPA for each phase (2x660 MW) at 85% PLF with GCV of 5200 kcal/kg and will be imported from Australia / Indonesia. The cooling/sea water requirement is 6,29,424 m³/d and fresh water (desalinated) requirement is 27,216 m³/d.
4. *Based on the information provided and the presentation made, the Committee recommended the standard TORs (as applicable) at **Annexure-A1** and **A2** for undertaking detailed EIA study and preparation of EMP in addition to the specific TOR as under.*

2.10 Expansion Project of 350 MW coal based TPP (Phase III) at Komaragiri, Kakinada, East Godavari District, Andhra Pradesh by M/s Spectrum Power Generation Ltd.– reg. ToR

1. The project proponent and their environmental consultant, M/s. Vimta Labs Limited, Hyderabad made a presentation and provided the following information.
2. Phase I (208 MW CCPP) project had achieved commercial operations on April 19, 1998. SPGL sells the entire power generated from the Phase I project to the AP state distribution companies (erstwhile APSEB) under a long term power purchase agreement. Phase II (1350 MW CCPP) project has obtained Environmental Clearance vide J-13012/138/2007-IA-II (J) dated 1-6-2010. Construction of phase II has been put on hold as per the advice of CEA and MOP as MoPN&G has not given additional domestic gas projections till 2015-16. SPGL, now proposes to implement an additional 350 MW coal based thermal power plant (Phase III) with 100% imported coal, adjacent to Phase I and Phase II.
3. The total land requirement is 230 acres of which the plant area, ash pond area and greenbelt area is 140, 30 and 60 acres respectively. The proposed site is already in possession of SPGL and no rehabilitation & resettlement is involved. There is no forest land, marshy land and wetlands involved in the project site. The current land use of the site is under industrial category. There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves and Heritage sites within a radius of 10 Km from the site. The project cost is about Rs. 2178.17 crores.

4. The proposed TPP will be based on sub-critical technology. The coal requirement is 1.45 MTPA at 100% PLF with an average GCV of 4800 kcal/kg and will be imported from Indonesia. The water requirement is 3044 m³/h (29.9 cusecs) [COC: 1.5] which will be sourced from Bay of Bengal.

5. *Based on the information provided and the presentation made, the Committee recommended the standard TORs (as applicable) at **Annexure-A1** and **A2** for undertaking detailed EIA study and preparation of EMP in addition to the specific TOR as under.*

(i) *As agreed, Stack of height 275 m shall be installed since the cumulative capacity after Phase-II (although not yet implemented) may mandate the same.*

(ii) *Action plan for transportation of coal from the Port by closed conveyor.*

(iii) *Cumulative impact assessment including the rise in temperature for 15 km radius shall be carried out.*

2.11 Expansion of Kawai Thermal Power Plant from 1320 MW by addition of 2x800 MW (Phase-II) Coal Based Thermal Power Plant at Village Kawai, District Baran, Rajasthan by M/s Adani Power Rajasthan Ltd.- reg. ToR

1. The project proponent and their environmental consultant, M/s. Greencindia Consulting Pvt. Limited, Ghaziabad made a presentation and provided the following information.

2. Environmental clearance for Phase I (2x660 MW) was granted on 04.05.11 and amendment for change in source of fuel was granted on 13.03.2014. Phase I project is operational (Unit#1 since 31.05.13 & Unit#2 since 31.12.13). Currently, Phase-I units are operating on domestic coal procured through MOU route from MCL/SECL. Proposed Phase - II will be installed adjacent to Phase-I within the premises of existing land. There is no requirement of additional land for the expansion project, as the land of 578.53 ha has been already allotted by the Government of Rajasthan to APRL, out of which the existing 2x660 MW Power Plant has been developed in 350 ha of land. The proposed expansion will utilize the balance 228.53 ha of land. Total cost of Phase-II (2x800 MW) excluding cost of land and other common infrastructure is INR 9100 crores.

3. The coal requirement is 7.14 MTPA @90% PLF and APRL applied for coal block/ long term linkage on 15.07.2014. The water requirement for the proposed expansion is 29 MCM and will be sourced from River Parwan. Total 34 MCM of water from Parwan River has been approved for the Project vide letter no. CEWR/TA(W)/1482 Dated 11.08.2009. Phase-I is already using 25 MCM of water and the balance 9 MCM shall be utilized for Phase-II. APRL requested to the Government of Rajasthan for additional allocation of 20 MCM/Year of water from existing source.

4. The committee noted that the existing green belt development should have been much denser and hence recommended that the same shall be expedited and progress made shall be clearly shown in the EIA/EMP report. The PP requested for collection of baseline data from 1st October, 2014, for which the committee has agreed.

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

(i) Detailed progress made in the greenbelt development of the existing unit along with photographs.

2.12 3300 MW (5X660 MW) Power Project at Village Bhadreshwar, Mundra Taluk, Kutchh Distt., in Gujarat by M/s Kutchh Power Generation Ltd.

1. The project proponent and their environmental consultant, M/s. Greencindia Consulting Pvt. Limited, Ghaziabad made a presentation and provided the following information. ToR for the above proposal was accorded on 04.11.2009. EIA Study was completed and submitted to GPCB and Public Hearing was held on 06.10.2010. The project is based on blended coal: Domestic Coal- 70% and Imported Coal- 30%. Domestic coal linkage is applied for and is still pending with the Ministry of Coal. In the absence of fuel linkage, the EIA Report could not be finalized as the source of coal, its characteristics and transportation logistics could not be finalized. The present proposal is for fresh approval of ToR and exemption of Public Hearing is also requested.
2. The project area is optimized to 320 Ha. and will be located outside the CRZ area. There is no forest land involved in the project site. The corner coordinates of the project site are from Latitude 22°52'47.7" N to 22° 53' 40.1" N and Longitude 69°51'30.6" E to 69° 52' 36.8" E. There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves and Heritage sites within a radius of 10 Km from the site. Mithi River and Gulf of Kutchh are at a distance of 2 km and 4 km respectively. Fishery area is also located within 10 km radius. The project cost is about Rs. 17,000 crores.
3. The Project is conceived & designed on Blended Coal (70% Imported & 30% Indigenous) with a total coal requirement is 13.02 MTPA. The proposed project is based on Sea water with once through cooling system. Total make-up Water requirement will be 3,94,563 m³/h. The revised coordinates for intake and outfall points and approved by Gujarat Maritime Board are

Intake: 22°49'48.15" N & 69°53'12.50" E and Outfall: 22°50'34.61" N & 69°50'20.25" E.

4. Based on the information provided and the presentation made, the Committee recommended for a site visit by a sub-committee and **deferred** the proposal. The PP requested for collection of baseline data from 1st October, 2014, for which the committee agreed subject to the approval of ToR and completely at the risk of PP.

3.0 Any other items with the permission of the Chair.

3.1 Addition of 6 MW Turbine to existing 60 MW Captive Power Plant at Govindapuram & Aminabad Villages, Taluk & Distt. Ariyalur Distt. Tamil Nadu by M/s The Ramco Cements Ltd. - reg. ToR

1. The project proponent and their environmental consultant, Environmental System Consultants & Ambiente Lab Solutions Private Limited, Chennai made a presentation and inter-alia provided the following information.
2. The Ramco Cements Ltd. (formerly Madras Cements Ltd.) (RCL) had established its Govindapuram Cement Plant in Ariyalur District in the Year 2008 (Line-I) with a cement production capacity of 3.0 MTPA along with a CPP of 1x18 MW in an extent of 81 Ha. EC for Line-I was awarded by MoEF on 24.08.2007 and Line-I is in operation since May 2009. MoEF awarded EC for expansion from 3.0 MTPA to 5.5 MTPA & 60 MW CPP on 23.11.2010. Public Hearing was conducted on 14.09.2010. The Cement Plant has been expanded with Line-II of 3.25 MTPA cement production capacity along with 60 MW CPP (in-lieu of 18 MW) in the Year 2012. Govindapuram Cement Plant (Lines I & II), 60 MW CPP and Township have been established in a total extent of 150 Ha falling in Govindapuram & Aminabad villages in Ariyalur District.
3. The existing CPP Boiler is a Conventional Rankine Steam Cycle TPP with single drum natural circulation, Fluidised Bed Combustion with under-bed fuel feeding system. The existing CPP has a single 40 MW and a single 20 MW Steam Turbine Units directly coupled Electrical Generators. Total steam generation capacity of existing three Boilers (of 85 Tons per Hour, TPH each) is 255 TPH. Boiler is designed to use Imported coal & Lignite. Boilers together with its associated auxiliaries would produce superheated steam at 89 kg/cm² and 515 °C. The super heated steam would be taken to the steam turbine generator, air cooled condensers and associated auxiliaries so as to generate 60 MW electricity totally. With Imported Coal as the only fuel, the Boilers can be overloaded @ 7.5% so as to generate an additional steam @ 6.5 TPH per Boiler and total 19.5 TPH. Thus, existing Boilers (of 3x85 TPH) can produce about 275 TPH steam with the overloading. On actual operation, it is found that the steam requirement for 60 MW power generation is only 249 TPH @ 4.15 TPH per MW. Thus, there is a surplus steam capacity of 26 TPH unutilized now. Thus, without adding any additional Boiler, the existing CPP can generate the required 66 MW thermal power by adding only a 6 MW Turbine to it. Accordingly, it is proposed to augment the power generation by adding only 6 MW Turbine with Air-cooled condenser to enhance the power generation from 60 MW to 66 MW.
3. No boiler and its other associated machineries are envisaged for the proposed augmentation. Proposed within the existing Industrial Premises and no additional land is required. Other than coal handling (additional 75 TPD to existing 765 TPD), no additional infrastructure facilities are required or proposed. Entire Ash generated in the CPP (8.8 TPD addition to the existing 92 TPD) is pneumatically transported and fully utilized in the Cement Plant for Cement manufacture. Thus, no Ash disposal or no Ash Pond/Dyke due to the proposal. Existing ESPs with 100 m & 82 m stacks will be adequate to control SPM emission <50 mg/Nm³, on Augmentation also. There is no man power increase and Air cooled condensers are proposed for 6 MW Turbine. Thus, no additional water demand to the existing consented quantity of 570 cum/day. On augmentation of CPP, only 3.0 cum/day effluents will be adding to existing 225 cum/day effluent. The entire effluent from CPP, after proper treatment in a neutralization pit, is fully utilized in the Cement Plant for equipment cooling. No additional sewage generation due to the augmentation (existing 6 cum/day sewage) and its disposal (treated in the common STP of 350 cum/day capacity). Thus, the Zero Effluent Discharge is ensured.

4. Transportation of raw materials and finished products are mainly by Rail Network. There is no eco sensitive zone in 10-km radius area and adequate buffer exists for the proposed activity in the environment. NOC for ground water drawl from SGWB has been obtained. Coal Agreement has been executed for the additional coal demand. Effective Green Belt is developed and maintained and effective Rain Water Harvesting Measures are carried out. Adequate EMP & CSR Budgets are proposed and implemented.

5. Two Public Hearings were conducted for the Plant in 2007 & 2010 under EIA Notification 2006. All are smooth public hearings and are welcomed by the Public in total. The issues raised in the Public Hearings are addressed and implemented fully.

6. As Spatial Impacts due to the Proposal are negligible/insignificant, the Public Consultation and Public Hearing may be exempted under Para 7(ii) of EIA Notification, 2006. It is also requested to utilize the available Premonsoon Data 2014 as October-November months are Monsoon Season in Tamil Nadu. All TORs awarded by MoEF will be complied with for the EIA Study.

7. The Committee deliberated on the above justification and opined that PH could be exempted for the proposed augmentation and also utilize the available Premonsoon Data of 2014 in preparation of EIA/EMP report. However, after preparing EIA/EMP report, the PP shall bring out a public notice in the leading newspapers involving local language informing the public about the proposed project and the findings of the EIA/EMP. The comments from the public should be obtained giving a time period of one month after the public notice is published. EIA/EMP report should be placed on the website for public information.

*8. Based on the information provided and the presentation made, the Committee recommended the standard TORs (as applicable) at **Annexure-A1** for undertaking detailed EIA study and preparation of EMP and exemption of public hearing.*

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

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.
- xl ii) 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.
- xl iii) 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.
- xl iv) 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.
- xl v) 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.
- xl vi) 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.
- xl vii) 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.
- xl viii) 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.

xl ix) 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.

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.

(Dr. C.R. Babu)
Vice Chairman (Acting Chair)

(Shri T.K.Dhar)
Member

(Shri J.L Mehta)
Member

(Shri G.S. Dang)
Member

(Shri A.K. Bansal)
Member

(Shri N.K. Verma)
Member

(Dr. S.D. Attri)
Representative of IMD

(Dr. S.S. Bala)
Representative of CPCB

(Shri N.S. Mondal)
Representative of CEA

) (Dr. Asha Rajvanshi
Representative of WII

(Dr. Saroj)
Member Secretary