

MINUTES OF THE 54th MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE ON ENVIRONMENTAL IMPACT ASSESSMENT OF THERMAL POWER AND COAL MINE PROJECTS

The 54th Meeting of the reconstituted Expert Appraisal Committee (Thermal) was held during August 6-7, 2012 at Scope Convention Centre, SCOPE Complex, Lodhi Road, New Delhi. The members present were:

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| 1. | Shri V.P. Raja | - | Chairman |
| 2. | Dr. C.R. Babu | - | Vice-Chairman |
| 3. | Shri T.K. Dhar | - | Member |
| 4. | Shri J.L. Mehta | - | Member |
| 5. | Dr. G.S. Roonwal | - | Member |
| 6. | Shri M.S. Puri | - | Member |
| 7. | Dr. S.D. Attri | - | Member |
| 8. | Dr. Saroj | - | Member Secretary |

Dr. CBS Dutt, Dr. K.K.S. Bhatia, Shri V.B. Mathur and Member Secretary CPCB were absent.

In attendance: Sh. W. Bharat Singh, Deputy Director, MoEF.

The deliberations held and the decisions taken are as under:

DATE: 06.08.2012.

ITEM No.1 Confirmation of the minutes of the last meeting.

Confirmation of the last meetings held during June 25-26, 2012; July 2-3, 2012 and July 16, 2012 were taken up.

The Committee noted that there are minor mistakes in the minutes of the 50th Meeting which require slight amendment as follows:

- a) At Item No. 2.1 pertaining to 2x800 MW Ennore SEZ Supercritical Coal Based TPP of M/s TANGEDCO the sentence in the last paragraph read as "*The Committee however decided that based on the information and clarifications provided to recommend the project for environmental clearances subject to stipulation of the following specific conditions and submission of documents / requirements as mentioned above*" shall now read as under:

“The Committee however decided that based on the information and clarifications provided, the proposal can be recommended environmental clearance subject to stipulation of the following specific conditions and submission of documents / requirements as mentioned above”.

b) At Item No. 2.13 pertaining to modernization and expansion of existing power plant from 741.7 MW to 999.7 MW of M/s Hindalco Industries Ltd. at Renusagar, in Sonebhadra Distt., in Uttar Prdaesh, in the stipulation no (ii) read as “Sulphur and ash contents in the coal to be used in the project shall not exceed 0.4% and 40 % respectively at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to environmental clearance condition wherever necessary”, the figure 40 % for ash content in coal shall be now substituted by 10%.

ITEM NO. 2.0 CONSIDERATION OF PROJECTS

2.1 2x 660 MW Super Critical Imported Coals Based Thermal Power Plant of M/s Universal Crescent Power Pvt. Ltd. at Nayachar Island, in Purba Medinipur District, in West Bengal -reg. Environmental Clearance.

The proposal was earlier considered in the 44th Meeting held during March 5-6, 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°59'14" N to 22°00'36" N and Longitude 88°06'08" E to 88°07'27" 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 said 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 deliberated 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 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.

2.2 2X660MW Based Thermal Power Plant of M/s NSL Nagapattanam Power & Infratech Pvt. Ltd. in District Angul, in Orissa - reg. Environmental Clearance.

The proposal was earlier considered in the 52nd Meeting held during July 2-3, 2012, wherein, the project proponent gave a presentation and provided the following information:

The proposal is for 2x660 MW Coal Based TPP at village Tehrampur, in Talcher Taluk, in Angul Distt., in Orissa. Land requirement will be 793.89 acres, out of which 754.43 acres is single crop agriculture land; 2.05 acres is grazing land; 9.45 acres is settlements; 3.56 acres is barren land and 24.40 acres is others land. Out of 793.89 acres of land, about 763.88 acres is private land which has been acquired by PP as per LA Act 1894 and 30.01 acres is Govt. land from which 16.22 acres of land is under the possession of PP sanctioned by Govt. of Orissa. The co-ordinates of the site are located within Latitude 20°54'04.19" N to 20°55'13.3" N and Longitude 85°10'36.8"E to 85°11'44.6" E. Coal requirement will be 6.44 MTPA blended coal at 100% PLF. Ash and sulphur contents in imported coal will be 5-15% and 0.1-0.5% respectively and in Indigenous coal will be 40-42 % and 0.5-0.6% respectively. Ministry of Coal, Govt. of India has given long term Coal Linkage from Mahanadi Coal Fields Ltd. of 4.273 MTPA (70%) dated 29.06.2012 and FSA has been signed for 30% of Imported Coal to be sourced from M/s PT Srinivasa Mining, Indonesia dated 17.02.2012. Ash pond area will be 168.5 acres and co-ordinates of the ash pond site is located within Latitude 20°54'26.2" N to 20°55'00.9" N and Longitude 85°10'13.3"E to 85°10'46.6" E. Twin-flue Stack of 275m shall be provided. Water requirement of 35.23 cusecs will be sourced from Brahmani River through a pipeline at a distance of about 10km from project site. There are no national parks, wildlife sanctuaries, heritage sites, tiger/biosphere reserves etc. within 10 km of the project site. Public Hearing was held on 19.11.2007. Cost of the project will be Rs.7796.78 Crores.

It was also informed that TOR was issued in the name of M/s Mahanadi Aban Power Co. Ltd. for 2x515 MW on 11.05.2007. The configuration was later on changed to 2x660 MW and approval for the same was accorded on 29.04.2011. Public Hearing was held on 19.11.2007 for 2x515 MW capacity. The project was placed for consideration for environmental clearance in March, 2009,

wherein the EAC had declined to appraise the project since firm coal and water linkage was not in place.

It was also informed in the 52nd Meeting that in the meantime the proposed 2x660 MW power project of M/s Mahanadi Aban Power Co. Ltd. had been acquired by M/s NSL Nagapatnam Power & Infratech Pvt. Ltd. The Committee had noted that merger and acquisition process was under process and yet to be completed. The Committee had, therefore observed that the project proponent had no locus stand to apply for environmental clearance as on the date for a project was held by some other entity. The Committee had therefore decided to consider the proposal when all process of merger/acquisition was complete and relevant documents were in place. Accordingly the proposal was deferred.

M/s NSL Nagapatnam Power & Infratech Pvt. Ltd. submitted copy of Order of the High Court of Madras dated 27.07.2012 for scheme of amalgamation of M/s Mahanadi Aban Power Co. Ltd. and M/s NSL Nagapatnam Power and Infratech Pvt. Ltd.

The Committee also noted that grazing land of about 2.05 acres need to be avoided and in case the same was not possible it shall be ensured that an equal area of grazing land shall be first developed and handed over to the community for their use.

The matter was again taken up before the Committee for consideration of environmental clearance. The Committee noted that Angul town is located at about 10 Kms. It was also observed that since Angul is already notified as a critically polluted area, the project proponent need to study in detail the Action Plan formulated by the State Pollution Control Board for Angul area and take immediate steps for implementation of measures which may be applicable. The project proponent also informed that the CEPI value of Angul has now come down to 58325 from 82.09. M/s NTPC power plant was also located adjacent to the proposed site.

The Committee noted that even though cumulative impact assessment over 10 Kms appears to have been carried out, considering that Angul town was not far off and the area was notified as critically polluted area, the project proponent need to conduct cumulative impact assessment over a 15 Kms radius as a matter of abundant precaution and take necessary safeguards in the interest of environment. *The Committee accordingly decided that the project proponent shall submit addendum to EIA report to the Ministry before any action is taken by the Ministry.*

The Committee also noted that Indigenous and imported coal is proposed to be transported from Paradeep Port by rail over 197 Kms to the plant site and about 31 homestead oustees (families) and 651 families of land oustees would be involved.

The project proponent informed that each homestead oustees will be relocated in a Resettlement Colony over an area of 16.86 acres near village Tentulei and shall be provided all facilities. That each homestead oustees will also be given Rs 1,87,000/- for house construction. It was also informed that employment will be given to each member of homestead oustees or land looser family who have lost entire land.

The Committee also discussed the issues raised in the Public Hearing and the responses made by the project proponent. The issues raised were regarding implementation of measures/information contained in the EIA report; air pollution in Tentuli and measures required; polluting environment unfit for habitation; demand for civic amenities such as roads, power, water supply etc; adequate compensation for land losers; neighbouring power plants track record of environment protection very poor and same should not happen; likely discharge of waste water to nearby stream (Nadira river)likely leading to water pollution; EIA not covers proposed area and details of villagers to be displaced; area already a critically polluted area hence existing need to be first mitigated and then only new project can be considered; fly ash disposal by NTPC and NALCO nearby was a huge hazard and similar scene should not be repeated; plan for peripheral development was absent in EIA; fly ash an issue in the area; rehabilitation issue to be adequately addressed; proposed project not following guidelines of environment etc.

The Committee while deliberating the issues raised in the Public Hearing noted that people were aggrieved with the existing management particularly of fly ash disposal by neighbouring power plants like NTPC, Nalco etc. and observed that the project proponent need to go an extra mile and ensure that utilisation of fly ash shall be 100% from **day one of** the operation of the plant and accordingly plan their management of fly ash. The Committee also noted that the social issues raised such as compensation, rehabilitation and control of pollution mitigation measures seem to be adequate and shall be implemented in true spirit as committed in their presentation and clarification provided. Accordingly the Committee advised the project proponent to submit an undertaking to that effect along with addendum to EIA report (as mentioned earlier).

Based on the information and clarifications provided, the Committee *recommended environmental clearance* for the proposal subject to stipulation of the following specific conditions and submission of information/documents/requirements above mentioned:

- (i) Harnessing solar power within the premises of the plant particularly at available roof tops shall be undertaken and status of implementation shall be submitted periodically to the Regional Office of the Ministry.

- (ii) Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5 % and 34 % respectively at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to environmental clearance condition wherever necessary.
- (iii) Stack of 275 m height shall be provided with continuous online monitoring equipments for SO_x, NO_x and Particulate Matter (PM_{2.5} & PM₁₀).
- (iv) Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.
- (v) Grazing land (of about 2.05 acres falling in the project area) shall be avoided and in case the same is not possible it shall be ensured that an equal area of grazing land shall be first developed and handed over to the community for their use
- (vi) No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.
- (vii) COC of atleast 5.0 shall be adopted.
- (viii) Space provision for installation of FGD shall be made.
- (ix) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission from the proposed plant does not exceed 50 mg/Nm³.
- (x) Submit action plan along with mitigation and management of fugitive emissions in and around coal handling plants and implementation schedule and monitoring mechanism for a thick three tier green belt in and around coal handling plant and all around plant boundary except in areas not feasible, within six months to the R.O of the Ministry.
- (xi) 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.
- (xii) Utilisation of 100% Fly Ash generated shall be made from 4th year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.
- (xiii) 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 form. 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.
- (xiv) Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media so 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.
- (xv) 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.
- (xvi) Continuous monitoring for heavy metals in and around the existing ash pond area shall be immediately carried out by reputed institutes like IIT, Chennai.
 - (xvii) Fugitive emission of fly ash (dry or wet) shall be strictly controlled so that no agricultural or non-agricultural land is affected. Damage to any land, if any shall be mitigated and suitable compensation provided in consultation with the local Panchayat.
 - (xviii) Green Belt consisting of three tiers of plantations of native species around plant and at least 50 m width shall be raised. Tree density shall not less than 2500 per ha with survival rate not less than 80 %.
 - (xix) The project proponent shall also adequately contribute in the development of the neighbouring villages. Special package with implementation schedule for providing free potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.
 - (xx) An amount of Rs **31.0 Crores** during the construction phase of the Project shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs **6.2 Crores** per annum till the life of the plant shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for implementation.
 - (xxi) CSR scheme shall be identified based on need based assessment in and around the villages within 5.0 km of the site and in constant consultation with the village Panchayat and the District Administration. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training may also undertaken and put up on company's website.
 - (xxii) It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit to the MoEF the status of implementation of the scheme from time to time.

2.3 3X660 MW Koradi Thermal Power Station of M/s MAHAGENCO Ltd. at village Koradi, Tehsil Kampatee, District Nagpur, in Maharashtra - review of installation of FGD reg.

The request of M/s Mahagenco to review the condition regarding installation of FGD system was earlier placed in the 58th Meeting but neither the project proponent nor its representative attended the Meeting. The matter was again

placed in the 60th Meeting of the Committee held during December 11-12, 2009, wherein representative of M/s Mahagenco informed the following:

The capital cost for installation of FGD system would be about Rs 400 crore per unit. The company proposes to reduce coal consumption by changing the heat rate. Due to proposed changes in the system, the SO₂ concentration which was earlier predicted at 36.20 µg/m³ at 5.0 km would now be reduced to 24 µg/m³ at 3.7 km. Low NO_x burner will be used keeping into consideration the high values of NO_x in the area. FGD would require about 144TPD of limestone handling and to be transported over a distance of 200 Kms. Disposal of solid waste by-product will also be a matter of concern.

The Committee in the said 40th meeting deliberated in details the clarification and justification made by M/s Mahegenco while requesting the waiver of FGD. *“The Committee however was of the view that FGD was insisted upon only for one unit keeping into consideration the close proximity of Nagpur city which is located only at about 6.0 km from the plant and for other units based on requirement on AAQ prevalent then. The Committee had observed that the justification provided by the project proponent is only valid from its commercial interest and does not hold merit when it comes to public health interest. The Committee had accordingly left it to the MoEF to process the environmental clearance with the condition for installation of FGD.”* The Ministry thereafter proceeded with according environmental clearance with condition for installation of FGD and the same was issued in January 2010. *The Committee however agreed that the request can be reviewed at a later stage after adequate study has been done and scientific justification is submitted by the project proponent informing that non installation of FGD would not entail any adverse affect on air quality of Nagpur city.* The Committee had also decided that the three members of the erstwhile committee viz. Dr. S.D. Atri, Dr. S.K. Paliwal and Dr. R.V. Rama Rao can examine the predicted air quality modelling values based on IMDs annual meteorological data and submit an internal findings report for further consideration of EAC.

On receipt of the findings by the above mentioned sub-group, the matter was taken up again in the 69th meeting held during April 30- May 01, 2010 the observation of the sub group was discussed. The extract of the comments made by the sub-group is given below:

“The predicted SO₂ concentration from 3x660 MW with 3 flues were of the order of 50.9 µg/m³ in pre-monsoon season resulting in AAQ concentration of 69.2 µg/m³ including the existing baseline value of 18.3 µg/m³(which is much higher than the results given by project proponent viz. 24.0 µg/m³ + 18.3 µg/m³ = 42.3 µg/m³. The value may become higher in winter season owing to lower mixing height. The project could be reviewed for FGD after submission of winter data during December 2010 to February 2011.

Further, baseline NO_x values reported for Nagpur by MPCB (63 µg/cu m) are also high. As such, winter season NO_x may be monitored to ascertain the accurate status of air quality”.

In view of the observation of the Sub-Group the Committee had in the said 69th meeting expressed its inability to review the condition prescribed requiring FGD installation in one unit of 660 MW and suggested that the project proponent should submit the air quality for winter season during December 2010 to February 2011 for further review.

In the meantime an Appeal was filed in the National Green Tribunal by Krishi Vigyan Arogya Sanstha & Ors in the matter of Appeal No. 7 of 2011 (T). The matter has been disposed off on 20.09.2011 with specific directions to M/s MAHAGENCO and MoEF.

The Committee noted that there were several complaints of fly ash management for Koradi Plant. That a PIL was pending in the Nagpur Bench of the High Court of Bombay was purportedly with respect to hazards of fly ash from power plants run by MAHAGENCO including the Koradi plant.

The Committee also noted that the data submitted by MAHAGHENCO appeared to be inadequate and inconclusive. That the raw data collected needed to be cross checked w.r.t. nearest NAAQ station data. The Committee therefore decided that the project proponent shall submit raw data to representative of IMD for his review.

That Committee also observed that both Reliance and Tata Power plants near Mumbai were running with FGDs due to serious issues of SO₂ emission and in the instant case since the decision to stipulate FGD for initially one unit was taken consciously keeping Nagpur air quality in mind and as proposed by the project proponent a proper and through examination was as such necessary before a conscious decision is taken. The Committee therefore declined to accede with the request for waiver of FGD in its present form of information made available.

2.4 Expansion by addition of 1x250 MW Coal Based Thermal Power Plant of M/s Maharashtra State Power Generation Co. Ltd. at Paras, in District Akola in Maharashtra - reg. TOR reconsideration.

The proposal was earlier considered in the 44th Meeting held during March 5-6, 2012, wherein the project proponent along with its consultant M/s NEERI, Nagpur gave a presentation and the Committee observed the following:

“The Committee in the said 44th Meeting desired that the project proponent should have submitted compliance status to the environmental clearance for the existing unit(s) from the RO, Bhopal and compliance to the conditions stipulated in ‘Consent to Operate’ from the State Pollution Control Board.

It was also observed that water availability is an uncertainty especially in lean season and the project proponent shall submit details of water availability and water conservation measures proposed. Details regarding HFL, full reservoir capacity, showing the exact location of ash pond and its distance from the submergence area of reservoir along with data on ground water quality including the trace metal around the existing ash pond need to be submitted.

The Committee had also noted that green belt presently developed appeared to be very inadequate and the project proponent has not provided authentic details of the same. It was therefore decided that photographic details of existing green belt shall be submitted including revised plant layout depicting green belt developed. The land use details, as per revenue records of the proposed site, was also not specified. It was therefore decided that revenue records of the proposed land for the expansion shall be submitted authenticated / certified by the Tehsildar / SDO concerned.

In view of the above the proposal was deferred for re-consideration at a later stage.”

On submission of clarification on the above, the proposal was again placed before EAC for re-consideration. The project proponent has subsequently decided to change the capacity from 1x660 MW to 2x250 MW and finally to 1x250 MW only and has accordingly submitted revised Form-I and Feasibility report (for 1x250 MW) considering the water availability. The information provided is as follows:

The present proposal is for expansion by addition of 1x250 MW Coal based Subcritical power plant at Paras, District Akola in Maharashtra. The proposed expansion is to be executed into two phases viz. 1x250 MW (Phase-I) and 1x250 MW (Phase-II) respectively. Old 1x62.5 MW has been phased out in Oct', 2011. Presently 2x250 MW is in operation. Land required is adjacent to existing Paras TPS. Land requirement will be 110.92 ha out of which 60 ha of land will be utilized for Power House; 20 ha for railway siding; and 30 ha for green belt. Extra 61 ha of land for ash dyke which is already in possession. The co-ordinates of the plant site are located in Latitude 20°40'40" N and Longitude 76°48'50" E. Domestic Coal requirement will be about 1.3 MTPA. Water requirement will be about 16 MCM and will be sourced from Mun&Mus River at Bhikund through a pipeline at a distance of 5Kms from the project site. There are no National Parks, Wildlife Sanctuaries, Heritage Sites, Tiger/Biosphere reserves etc. within 10 km of the site.

The Committee noted that the location of the ash pond shall be so decided that the riparian system close to the TPP is not disturbed. The Committee further observed that since water availability is a primary concern in the present proposal no additional water allocation can be allowed. The project proponent shall optimize its water usage and shall ensure that the existing allocation can cater to the proposed expansion by addition of 1x250 MW.

Based on the information provided and presentation made, the Committee prescribed the following specific TOR over and above the standard TORs as at Annexure-A1 for undertaking detailed EIA study and preparation of EMP.

- i) Action Plan for carrying out long term study of radio activity, heavy metals from coal to be used and reputed institute identified for the task shall be formulated. The plan shall comprise of an in-built continuous monitoring mechanism for radio activity and heavy metals in coal and fly ash (including bottom ash).
- ii) Water balance indicating the fact that existing allocation can cater to the proposed expansion by addition of 1x250 MW shall be submitted.
- iii) Location of the ash pond shall be so decided that the riparian system close to the TPP is not disturbed. Accordingly layout depicting ash pond and details of landscape features with elevation shall be provided.

2.5 70MW (\pm 10%) Lakwa Power Project of M/s. Assam Power Generation Corporation at village Mybella, in Sivanagar Distt., in Assam – 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 through its consultant M/s Ramky Enviro Engineers Ltd., Andhra Pradesh and provided the following information:

The proposal is for replacement of 4x15 MW with 10x7 MW (\pm 10%) Gas Based Lakwa Power Project (LPP) at village Mybella in Sivanagar Distt., in Assam. Existing land of LPP is 211.8 acres and land requirement for replacement is 7.0 acres which is within the APGCL complex. The existing 4x15 MW will be phased out after 10x7 MW are commissioned. The co-ordinates of the sites are Latitude 26°59'07" N and Longitude 94°55'52"E. Gas requirement will be 0.36 MMSCMD and will be sourced from Oil India Ltd. (OIL)/ Gas Authority of India Ltd. (GAIL). Water requirement of 21.6 KLD will be sourced from Disang river through a pipeline at a distance of 5.5 km from the project site. There are no National Parks, Wildlife Sanctuaries, and Tiger/Biosphere Reserves etc. within 10 km of the site. Cost of the project is Rs. 263 Crores.

Based on the information provided and presentation made, the Committee prescribed the following specific TOR over and above the standard TORs as at Annexure-A1 for undertaking detailed EIA study and preparation of EMP.

- i) The project proponent shall explore possibility for waste heat recovery and shall furnish details thereof.
- ii) Status of compliance with the conditions stipulated in EC/NOC accorded for the existing units shall be submitted along with details pertaining to CSR activities carried out.

2.6 2x660 MW Coal Based Power Plant of M/s SNN Infra Power Project Pvt. Ltd. at villages DLpuram, in District Visakhapatnam, in Andhra 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 through its consultant M/s Paryavaran Labs India Ltd., and provided the following information:

The proposal is for setting up of 1320 MW coal based thermal power plant at villages DLpuram, in District Visakhapatnam, in Andhra Pradesh. Land requirement will be 490 acres. The total land available in the area around 550 acres of which 350 acres is Govt. Land and 200 acres is single crop agriculture land. The co-ordinates of the site are located in between Latitude 17°19'24.3" N to 217°19'57.0" N and Longitude 82°38'46.1"E to 82°39'50.8"E. Coal requirement will be 5.5 MTPA. Imported coal is proposed from Indonesia. Water requirement of 12500m³/hr with natural draft cooling tower will be sourced from the Bay of Bengal. There are no National Parks, Wildlife Sanctuaries, and Tiger/Biosphere Reserves etc. within 10 km of the site. About 500 land oustees will be involved from this project site.

The Committee noted that the proposal appeared quite close to BARC facilities and NOC from BARC may be required. The Committee further noted that the area appeared low lying one and required a proper scrutiny before agreeing to the site. It was therefore decided that a site visit may be undertaken by a Sub-Group under the Chairmanship of Dr. C.R. Babu and comprising of Dr. G.S Roonwal, Shri M.S Puri, Shri J.L. Mehta and a representative of the Ministry. Accordingly the proposal was deferred.

2.7 Expansion by addition of 500 MW (Phase-II) Gas Based combined cycle Power Plant of M/s Pioneer Gas Power Ltd. at Bhagad in Distt. Raigad, in Maharashtra - 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 through its consultant M/s Pollution and Ecology Control Services, Nagpur and provided the following information:

The proposal is for expansion by addition of 500 MW Phase-II Gas Based combined cycle Power Plant at Bhagad in Distt. Raigad, in Maharashtra. Phase-I consist of 388 MW and is under construction. Land requirement for Phase – I&II is 20.56 Ha which is notified as Industrial area by Maharashtra Industrial Development Corporation (MIDC) which is under possession. No additional land is required for Phase-II. The co-ordinates of the sites are Latitude 18°24'22.6" N and Longitude 73°21'5.28"E. Natural Gas requirement will be 1.749 MMSCMD. Gas pipe tapping to the project is from the Dabhol-Dahej main pipe lines (8kms from the Plant site). Nearly 7 kms of the pipe line is already laid by GAIL. Additional Water required for phase-II will be 1414 KLD and will be sourced from MIDC. There are no National Parks, Wildlife Sanctuaries, and Tiger/Biosphere Reserves etc. within 10 km of the site.

The project proponent also informed that they would explore feasibility for LNG option as fuel.

Based on the information provided and presentation made, the Committee prescribed the following specific TOR over and above the standard TORs as at Annexure-A1 for undertaking detailed EIA study and preparation of EMP.

- i) The project proponent shall explore possibility for waste heat recovery and shall furnish details thereof.
- ii) Status of compliance with the conditions stipulated in EC/NOC accorded for Phase-I shall be submitted along with details pertaining to CSR activities carried out.

2.8 1x120MW Imported and domestic Coal based Thermal Power Plant of M/s Dr Ramkirshna Prasad Power Pvt. Ltd. at village Sriramchnadarpuram, in District Ganjam, in Odisha –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 through its consultant M/s Bhagavathi Ana Labs Ltd., Hyderabad and provided the following information:

This is a 'B' category project but as the SEIAA of Orissa has expired is being taken up by MoEF.

The proposal is for setting up of 1x120MW Imported and Domestic Coal based Thermal Power Plant at village Sriramchnadarpuram, in District Ganjam, in Odisha. Land requirement will be 85.68 acres, out of which 74.21 acres is Govt. land and 11.47 acres is private land. The co-ordinates of the site are located in between Latitude 19°19'28.82" N to 19°19'55.75" N and Longitude 84°56'18.09" E to 84°56'32.95" E. Coal requirement will be 0.48 MTPA at 85%

PLF. Blended coal (70:30 imported :domestic) will be used. Coal will be imported through Gopalpur Port located at about 3.5 kms away. Water requirement of 35.8 MLD will be sourced from Bay of Bengal through a pipeline at a distance of 4 km from the project site. Area required for Ash pond will be 10.0 acres. There are no National Parks, Wildlife Sanctuaries, and Tiger/Biosphere Reserves etc. within 10 km of the site.

The Committee felt that the area might be rich in beach sand minerals and it was therefore advisable that a certificate from the Atomic Mineral Directorate or Indian Rare Earths be obtained indicating that the proposed site was free of economically mineable beach sand mineral bearing area.

The Committee also felt that Olive Turtle nesting in the area may be studied in detail. The project proponent shall ensure that preservation and conservation of Olive Turtle is given due priority.

Based on the information provided and presentation made, the Committee prescribed the following specific TOR over and above the standard TORs as at Annexure-A1 and Annexure-A2 for undertaking detailed EIA study and preparation of EMP.

- i) A certificate from the Atomic Mineral Directorate or Indian Rare Earths shall be obtained indicating that the proposed site is free of economically mineable beach sand mineral bearing area.
- ii) The project proponent shall ensure that study relating to preservation and conservation of Olive Turtle is taken on priority and accordingly conservation plan shall be prepared long with budgetary details and submitted.
- iii) Action Plan for carrying out long term study of radio activity, heavy metals from coal to be used and reputed institute identified for the task shall be formulated. The plan shall comprise of an in-built continuous monitoring mechanism for radio activity and heavy metals in coal and fly ash (including bottom ash).

2.9 Expansion by addition of 800 MW Supercritical Coal Based Kothagudem Thermal Power Station (Stage- VII) of M/s Andhra Pradesh Generation Corporation. Ltd. at Distt. Khammam, in Andhra Pradesh - reg. TOR.

The proposal was considered for determination of terms of reference for undertaking EIA/EMP study as per the provisions of EIA Notification, 2006. The project proponent gave a presentation through its consultant M/s Ramky Enviro Engineers Ltd., Andhra Pradesh and provided the following information:

The proposal is for expansion by addition of 800 MW Supercritical Coal Based Kothagudem Thermal Power Station (Stage- VII) at village Paloncha Distt. Khammam, in Andhra Pradesh. The co-ordinates of the site are located in between Latitude 17°36'23" N to 17°36'53" N and Longitude 80°40'57"E to 80°42'05"E. Coal requirement will be 4.39 MTPA. Water requirement of 48 MLD will be sourced from Godavari River through existing pipeline at a distance of 26 km from the project site. Area required for ash pond will be 230 acres. Kinnerasani wildlife sanctuary is located at a distance of 2 km from the project site. Suraram Reserve Forest is present at 1.5 km from the project site. About 125 land oustees will be involved.

The Committee noted that a wild life sanctuary being located close by, a prior approval of the Standing Committee of the National Board of Wildlife is a necessity.

The Committee also noted that presently there are 11 operating units with installed capacity of 1720 MW in the power station comprising of Stage-I: 4x60 MW; Stage-B&C: 4x120 MW; Stage-V: 2x250 MW; and Stage-VI: 1x500 MW. That some of these plants were very old and needed to be phased out. The Committee also observed that fly ash utilization appeared to be poor and the project proponent need to indicate concrete action plan with commitment for efficient fly ash utilisation and management. *The Committee therefore decided that no additional ash pond can be permitted for the expansion proposal.*

The Committee also decided that no further expansion besides Stage-VII can be permitted in the power station.

The project proponent informed that 60 MW and 120 MW units will be phased out.

Based on the information provided and presentation made, the Committee prescribed the following specific TOR over and above the standard TORs as at Annexure-A1 and Annexure-A2 for undertaking detailed EIA study and preparation of EMP.

- i) Prior approval from the Standing Committee of the National Board of Wildlife shall be first obtained before application for environmental clearance is submitted.
- ii) Time schedule for phasing out 60 MW and 120 MW units shall be prepared and submitted.
- iii) Commitment stating that no further expansion shall be applied for beyond Stage-VII shall be submitted to the Ministry.
- iv) Details of ash pond and action plan for study of heavy metals in the existing ash pond area shall be submitted.

- v) Status of compliance to the conditions stipulated in EC/NOC of the earlier phases shall be submitted along with details pertaining to CSR activities carried out.
- vi) Action plan for carrying out long term study of radio activity, heavy metals from coal to be used and reputed institute identified for the task shall be formulated. The plan shall comprise of an in-built continuous monitoring mechanism for radio activity and heavy metals in coal and fly ash (including bottom ash).

2.10 Expansion by addition of 800 MW Supercritical Coal Based TPP of M/s Andhra Pradesh Power Generation Corporation Ltd. at village Ibrahimpatnam, in Distt. Krishna, in Andhra Pradesh-reg. TOR

The proposal was considered for determination of terms of reference for undertaking EIA/EMP study as per the provisions of EIA Notification, 2006. The project proponent gave a presentation through its consultant M/s Ramky Enviro Engineers Ltd., Andhra Pradesh and provided the following information:

The proposal is for expansion by addition of 800 MW (Stage -V) Supercritical Coal Based TPP at village Ibrahimpatnam, in Distt. Krishna, in Andhra Pradesh. The co-ordinates of the site are located in between Latitude 16°35'19.41" N to 16°35'30.60" N and Longitude 80°32'0.34" E to 80°32'43.31" E. Coal requirement will be 3.14 MTPA at 85% PLF. Water requirement of 48 MLD will be sourced from Krishna river through existing cooling water canal at a distance of 1 km from the project site. Kondapalli Reserve forest is located at 3 km from the project site. About 290 land oustees will be involved from this expansion project.

The Committee also noted that presently there are 7 operating units with installed capacity of 1760 MW in the power station comprising of Stage-I to III: 6x120 MW; and Stage-VI: 1x500 MW. It was also noted that some of these plants are very old and need to improve their efficiency. Additional ash pond of 93.1 Ha adjacent to the existing ash pond is also proposed.

Based on the information provided and presentation made, the Committee prescribed the following specific TOR over and above the standard TORs as at Annexure-A1 for undertaking detailed EIA study and preparation of EMP.

- i) Details of ash pond and action plan for study of heavy metals in and around the existing ash pond area shall be submitted.
- ii) Status of compliance to the conditions stipulated in EC/NOC of the earlier phases shall be submitted along with details pertaining to CSR activities carried out.
- iii) Action Plan for carrying out long term study of radio activity, heavy metals from coal to be used and reputed institute identified for the task

shall be formulated. The plan shall comprise of an in-built continuous monitoring mechanism for radio activity and heavy metals in coal and fly ash (including bottom ash).

- 2.11 2100 MW Gas Based Combined Cycle TPP of M/s Andhra Pradesh Power Development Corpn Ltd. near Nedunoor, in Karimnagar Distt., in Andhra Pradesh. -reg. Extension of validity of EC

M/s Andhra Pradesh Power Development Corpn. Ltd. was accorded environmental clearance for its 2100 MW Gas Based Combined Cycle TPP near Nedunoor, in Karimnagar Distt., in Andhra Pradesh on 07.06.2007. M/s APPDCL has submitted that tendering process for award of contract on EPC basis is getting delayed due to non-allocation of gas linkage and has therefore requested the Ministry for extension of validity period for a further period of five years.

The request was placed before the Committee for its views.

The Committee noted that the gas issue was well known and the request can be acceded to in accordance with the provisions laid down in the EIA notification 2006. The Committee therefore agreed and recommended that the Ministry may carry out the needful as requested.

DATE: 07.08.2012

- 2.12 Expansion by addition of 20 MW to 35MW (100% Biogas Based) of Existing Power Plant of M/s Simbhaoli Sugars Ltd. at Village Chilwaria, District Bahraich in Uttar Pradesh- reg. TOR
- 2.13 Expansion by addition of 22 MW (100% Biomass Based) of Existing Power Plant of M/s Simbhaoli Sugars Ltd. at Village Brijnathpur, District Ghaziabad in Uttar Pradesh- reg. TOR
- 2.14 Expansion by addition of 18 MW (100% Biogas Based) of Existing Power Plant of M/s Simbhaoli Sugars Ltd. at Village Simbholi, District Ghaziabad in Uttar Pradesh- reg. TOR

The above three proposals are taken clubbed in sequel as they belonged to the same project proponent.

The Committee noted that neither the project proponent nor its representative were present in the meeting. The matter was accordingly deferred for re-consideration at a later stage.

2.15 Expansion by addition of 185 MW CFBC Captive Boiler Thermal Power Plant of M/s Bhushan Energy Ltd. at village Meramandali, District Dhenkanal, in Orissa by - reg. TOR.

The proposal was earlier considered in 28th meeting of EAC (T) held during July 4-5, 2011 for determination of terms of reference for undertaking EIA/EMP study and the project proponent provided the following information:

The proposal is a 'B' Category but as it falls in Odapada Block which is notified as critically polluted area and hence the proposal is being considered in the Centre. The existing plant is 2x150 MW, which is in operation within the premises of M/s Bhushan Energy Ltd. The proposal is for expansion by addition of 185MW CFBC Boiler Captive Thermal Power Plant at village Meramandali, District Dhenkanal in Orissa. Two numbers of 425 TPH CFBC Boilers will be installed to run 165 MW Steam Turbine Generator. Excess steam will be utilized in adjacent power plant to generate additional 20 MW. Land requirement will be 335 acres. The co-ordinates of the plant site are at Latitude 20°47'42.0" N and Longitude 85°15'11.5"E. Water requirement will be about 616 m³/hr, which will be sourced from the Brahmani River through a pipeline. The pipeline is already inside the plant. There are no National parks, Wildlife Sanctuaries, Tiger/Biosphere reserves etc. within 10 km of the site.

In 28th meeting, the Committee had noted that the project proponent did not submit compliance to the conditions stipulated in the environmental clearances of its previous phase for both Steel and Power plants, which is reported to be very poor. The Committee therefore decided that the Ministry may obtain status of compliance from its Regional Office and the State Pollution Control Board before the case is considered. Accordingly the proposal was deferred for reconsideration at a later stage.

The project was placed again in 50th meeting of EAC held during June 25-26, 2012, neither the project proponent nor its representative was present to defend the proposal. The proposal was therefore deferred for re-consideration at a later stage.

The Committee noted that another proposal of the same project proponent and in the same integrated steel plant complex was earlier considered for addition of 256 MW Captive TPP, wherein an existing plant of 110 MW was reported to be in operation. The Committee therefore observed that the present proposal being considered as 'B' category may be inappropriate as total capacity for TPP will exceed 500 MW.

The Committee observed that the total plant including proposal for expansion within or around the steel plant complex need to be viewed in totality as the TPPs have common facilities. It was further noted that total power plant capacity will be about 750 MW after expansion.

The Committee also noted that composition of fuel was not clear and the project proponent needed to spell out the same in totality.

The Committee noted that there are prima facie a lot of missing information and the present proposal cannot be considered in isolation. The Committee therefore decided that comprehensive information of the steel plant (including present and future expansion proposal), the captive thermal power plants in existence and the proposed expansions of the TPPs need all to be first furnished along with compliance status of environmental clearances (steel and power plants) as earlier mentioned in the 28th meeting by the Regional Office of the Ministry before the proposal can be considered.

In view of the missing gaps of information the Committee decided that a consolidated proposal shall be made by the project proponent afresh and the matter can be taken up on receipt of the information of the above mentioned issues. Accordingly the proposal was deferred.

2.16 50 MW Coal Washery Reject & Coal Based Thermal Power Project of M/s Spectrum Coal & Power Ltd. in Korba Distt., in Chhattisgarh – reg. Amendment of EC.

M/s Spectrum Coal & Power Ltd. was accorded environmental clearance for 50 MW washery reject based TPP at village Ratija, in Korba Distt., in Chhattisgarh on 31.12.2007.

M/s Spectrum Coal & Power Ltd has now informed that the environmental clearance accorded has inadvertently not mentioned area for ash pond even though the total land required for the power project is mentioned not to exceed 30 ha. That in view of the same CECB has denied issuing CFE for ash pond construction and have advised amendment in EC first.

The matter was taken up before the Committee.

The Committee noted that perusal of the minutes of the appraisal for the power project clearly mentions that ash pond should be shifted away from the river, indicating that the proposal encompasses ash pond as normally required for bottom ash storage.

The Committee also noted that during appraisal of the proposal for EC the total land proposed was 79 ha. However the Committee seem to have conceded only 30 ha and records seem to suggest that ash pond shall be only in 8 ha. The Committee therefore decided that ash pond area of 8 ha can be permitted as was purportedly agreed during the appraisal of the proposal for EC during its meeting in November 14-16, 2007. The Committee accordingly recommended the Ministry for issuing amendment as may be necessary.

2.17 Expansion by addition of 1x800 MW (Stage-II) Supercritical Coal Based Thermal Power Plant of M/s APPDCL at village Nelaturu, in Muttukuru Tehsil, in SPS Nellore Dist., in Andhra Pradesh - reg.TOR

The proposal was considered for determination of terms of reference for undertaking EIA/EMP study as per the provisions of EIA Notification, 2006. The project proponent gave a presentation through its consultant M/s Vimta Labs Ltd., Hyderabad and provided the following information:

The proposal is for expansion by addition of 1x800 MW (Stage -II) Supercritical Coal Based Thermal Power Plant at village Nelaturu, in Muttukuru Tehsil, in SPS Nellore Dist., in Andhra Pradesh. Presently 2x80 MW is under implementation. Land requirement will be 51 acres for Stage-II which is already under possession. The co-ordinates of the site are located in between Latitude 14°19'0.1" N to 14°20'1.3" N and Longitude 80°06'46.3"E to 80°08'35.0"E. Coal requirement will be 3.445 MTPA at 85% of PLF. Blended coal 70:30 (Domestic: Imported) shall be used. Reliance Krishnapatnam UMPP is proposed to come up adjacent to the site. Water requirement of 57.4MCM will be sourced from the Bay of Bengal through a pipeline at a distance of 2.2 km from the project site. There are two Reserve forest Vizlpuru Reserve Forest and Tammenapatnam RF located at 6.5 and 9.7 km respectively from the project site. There are no National Parks, Wildlife Sanctuaries, and Tiger/Biosphere Reserves etc. within 10 km of the site.

Based on the information provided and presentation made, the Committee prescribed the following specific TOR over and above the standard TORs as at Annexure-A1&A2 for undertaking detailed EIA study and preparation of EMP.

- i) Details of ash pond and action plan for study of heavy metals in the existing ash pond area shall be submitted.
- ii) Status of compliance to the conditions stipulated in EC/NOC of the earlier phases shall be submitted along with details pertaining to CSR activities carried out.
- iii) Action plan for carrying out long term study of radio activity, heavy metals from coal to be used and reputed institute identified for the task shall be formulated. The plan shall comprise of an in-built continuous monitoring mechanism for radio activity and heavy metals in coal and fly ash (including bottom ash).

2.18 5x800 MW Coal Based TPP of M/s Maha Tamil Mining & Thermal Energy Ltd. at village Gharghoda, Jhariapali, Charbhanta, Barpali, Nawapara, Taluk Gharghoda and Tamnar, in Raigarh Distt., in Chhattisgarh -reg.TOR.

The proposal was considered for determination of terms of reference for undertaking EIA/EMP study as per the provisions of EIA Notification, 2006. The project proponent gave a presentation through its consultant M/s Vimta Labs Ltd., Hyderabad and provided the following information:

The proposal is for setting up of 5x800 MW Coal Based TPP at village Gharghoda, Jhariapali, Charbhanta, Barpali, Nawapara, Taluk Gharghoda and Tamnar in Raigarh Distt., in Chhattisgarh. The site is in CBM Coal Block identified by MoP&NG. The TPP site is about 8 kms from Gare Palma-II sector Coal Block, where coal is proposed to be sourced. This coal block was allotted by Ministry of Coal jointly to Tamil Nadu Electricity Board and Maharashtra State Mining Corporation Ltd. Land requirement will be 1400 acres of which 1346 acres is single crop agricultural land; 24 acres is waste land and 30 acres is others (not specified by PP). The co-ordinates of the site are located in between Latitude 22°09'09" N to 22°11'05" N and Longitude 83°21'10"E to 83°22'29"E. Coal requirement will be 18 to 19 MTPA. Water requirement of 42 to 45 MCM will be sourced from the Mahanadi river through a pipeline at a distance of 60 km from the project site. Air cooled condenser shall be installed. Suitable raw water intake system including intake well and Pump house is envisaged. There are around 5 Reserve Forests within 10 km radius of the project. There are no National Parks, Wildlife Sanctuaries, and Tiger/Biosphere Reserves etc. within 10 km of the site. About 1700 land oustees will be involved.

The Committee noted that CBM block was accorded EC in October, 2008 but purportedly due to lack of CBM potential the project seemed to have been shelved for the present. The Committee observed that even North Karanpura TPP of M/s NTPC has still not got approval as it purportedly is proposed in a coal bearing area and therefore advised the project proponent that prior clearance from MoP&NG and MoC shall be first obtained for consideration of the present site. It was also noted that the chosen site appeared to be surround by forests all around and may not therefore be an ideal site for a TPP. The Committee also informed the project proponent that parallely they may choose to identify alternative sites.

In view of the above the proposal was deferred for reconsideration at a later stage.

2.19 1200 MW Rosa Thermal Power Project of M/s Rosa Power Supply Co. Ltd. at Shahjahanpur, in Uttar Pradesh-reg. Amendment in EC.

M/s Rosa Power Supply Co. Ltd. was accorded environmental clearance for Phase -II (2x300 MW) on 20.07.2009. The clearance letter at condition no. (ii) under para no. 3 prescribes as under:

“No facility related to the project shall remain within 500 mts distance from State Highway No.25 except water reservoir which should be shifted beyond 500 meter from SH 25 within three years from the date of issue of this letter for this project.”

M/s Rosa Power Supply Co. Ltd. informed that the acquisition of additional land to accommodate all facilities related to the project beyond 500 mts from the State Highway No. 25 may not be presently feasible in view of current land acquisition scenario in the state. That the structures/facilities currently falling within 500 mts of the State Highway No. 25 are non-polluting and does not affect the environment in any manner. Sifting of non-critical structures would not only require prolonged shutdown of the entire plant which would have adverse impact on the State and add to grave hardship to consumers but also may not serve any purpose.

M/s Rosa Power Supply Co. Ltd. therefore requested the Ministry for review of condition requiring shifting of Raw water Reservoir and other non polluting structures like administration block, fire station, part of Water Treatment Plant which are falling within 500 mts from State Highway No. 25.

M/s Rosa Power Supply Co. Ltd. also informed that the original plot plan for Phase-I (2x300 MW) was planned without any core structure within 500 m from state highway and expansion by addition of phase-II was required by Govt. of UP to be done within the same plot size. That they are already short of 96 ha as per CEA norms for both phase-I & II.

The request was placed before the Committee for its consideration.

The Committee noted that there was no merit in shifting of water reservoir and can be permitted. With respect to non polluting structures as mentioned above, the Committee however, observed that considering any requirement by the State Govt. for expansion of the State Highway at a later date, the same can be permitted on specific condition that the project proponent submit an undertaking that they shall make available the land so required to the State Govt. for the purpose of high way expansion (as may be required). The Committee also decided that the project proponent shall obtain an NOC from the State Govt. agency concerned. Accordingly the Committee recommended that the Ministry may issue out the necessary amendment on receipt of the undertaking on an affidavit and the NOC aforementioned.

2.20 1x500 MW Thermal Power Station of M/s Damodar Valley Corpn. Ltd. at Bokarao, Jharkhand - reg. Extension of validity of EC.

M/s Damodar Valley Corpn.Ltd.was accorded environmental clearance for its 1x500 MW Coal Based Thermal Power Plant at Bokaro, in Jharkhand on

30.03.2007. M/s DVC has now informed that LoA for main package was placed on 28.06.2008 to M/s BHEL and the project is under implementation. However, the project is delayed due to human resource, political and other issues. Ms/ DVC has therefore requested for an extension of validity period of EC for a further period of five years.

The request was placed before the Committee for its consideration.

The Committee noted that the progress of work shown seem to be satisfactory despite of various issues tampering the implementation of the project. The Committee therefore agreed that extension for a further period of five years can be recommended in accordance with the provisions of EIA notification 2006.

2.21 2340 MW Mejia Thermal Power Station of M/s Damodar Valley Corpn. Ltd. at Durlovpur, Bankura, West Bengal – reg. Permission for addl. Ash pond for unit 5 & 6.

M/s Damodar Valley Corpn.Ltd.was accorded environmental clearance for its 2x250 MW Mejia Thermal Power Station (Unit-5&6) at village Durlavpur, in Bankura Distt., in West Bengal on 10.02.2004. M/s DVC has now informed that no additional land was acquired during the capacity addition comprising of 1x210 MW (Unit-4); 2x250 MW (Unit-5&6); 2x500 MW (Unit-7&8). That Unit-1, 2 & 3 comprising of 3x210 MW came into operation in the year 1996, 1998 and 1999 respectively.

M/s DVC also informed that during conception of the power project the existing ash pond was designed with no concept to enhance the holding capacity and raising of dyke cannot be undertaken. M/s DVC therefore seeks permission for acquisition of 300 acres additional land for ash disposal.

The request was placed before the Committee for its consideration.

The Committee noted that the ash utilization of the power station seem to be very poor resulting in acute mismanagement. That in accordance with the norms the total ash disposal area available (about 600 acres) seem to be enough.

M/s DVC stated that out of total ash pond available, only about 470 acres is effective ash pond area and balance is green belt and dykes. M/s DVC requested that consideration on merit for the addl. ash pond can be made as they are in a precarious situation since the design of old ash pond for safety considerations cannot be redone / refurbished by raising height of dyke.

The Committee considered the request of M's DVC and desired that full facts along with other details justification on merit shall be submitted by M/s DVC for further consideration. Accordingly the matter was deferred.

2.22 1200 MW Coal Based TPP of M/s BALCO Ltd. at village Risda, in Distt. Korba, in Chhattisgarh - reg. Extension of validity of EC

M/s BALCO Ltd. was granted environmental clearance for its 1200 MW TPP at Korba Distt., in Chhattisgarh on 17.08.2007. M/s BALCO Ltd. has now informed that due to the implementation of the project got delayed due to collapse of its under construction chimney during September, 2009, which is reported to be a natural disaster. That the first unit is under commissioning stage and the targeted date for entire units is December, 2013.

M/s Balco Ltd. has therefore requested extension of validity period of the EC by another five years.

The Committee noted the request and deliberated the progress of work achieved including the incident of chimney collapse. The Committee was informed that the Chimney collapse was studied in detail by IIT Roorkee and prima facie was found to be a metrological phenomenon not related to design flaw of chimney design.

The Committee was also informed of a representation from an organization with allegations of violations of environmental rules and regulations. The Committee decided that M/s Balco Ltd. shall respond to the representation in writing and submit the same to the Ministry for any needful action as may be warranted.

The Committee agreed that the present request of extension of validity of EC can be agreed and recommended that the same can be carry out by the Ministry on receipt of satisfactory clarification on the representation cited above.

3.0 Any Other Item with the permission of the Chair.

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

It was also decided that the next meeting will be held during September 3-4, 2012.

Terms of Reference (TOR) :

- i) Vision document specifying prospective long term plan of the site, if any, shall be formulated and submitted.
- ii) Status of compliance to the conditions stipulated for 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, alongwith 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/ organisation 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 alongwith 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 utilisation 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-conductive 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 modelling 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 auxillary 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.
- xlii) 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.
- xliii) 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.
- xliv) 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.
- xlv) 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.
- xlvii) 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.
- xlviii) 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.

xlix) 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.

- l) 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.
