

MINUTES OF THE 10th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE ON ENVIRONMENTAL IMPACT ASSESSMENT OF THERMAL POWER & COAL MINE PROJECTS

The 10th Meeting of the reconstituted Expert Appraisal Committee (Thermal) was held on **January 21, 2014** at Fazal Hall, Scope Convention Centre, Scope Complex, Lodhi Road, New Delhi. The members present were:

1.	Shri A.S. Lamba	-	Chairman
2.	Dr. C.R. Babu	-	Vice Chairman
3.	Shri T.K. Dhar	-	Member
4.	Shri J.L. Mehta	-	Member
5.	Shri N.K. Verma	-	Member
6.	Shri P.D. Siwal	-	Member
7.	Dr. Saroj	-	Member Secretary

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

Shri A.K. Bansal, Shri G.S. Dang, Dr. C.B.S Dutt, Dr. S.D. Attri, Dr. Ratnavel, Representatives of CPCB and WII were absent.

2.1 4000 MW (6x660 MW) Coal based Ultra Mega Power Project of M/s Orissa Integrated Power Ltd. near Bhedabahal Village in Sundergarh Tehsil of District Sundergarh, in Odisha - reg. re-consideration for Environmental Clearance.

The proposal was earlier discussed in the 56th meeting of the EAC held during September, 3-4, 2012, the minutes of which are extracted as under.

“The proposal is for consideration for environmental clearance. The project proponent made a presentation along with its consultant M/s Desein Private Ltd., Delhi and provided following information:

The proposal is for setting up of 4000 MW Imported Coal based Ultra Mega Power Project near Bhedabahal village in Sundergarh Tehsil of District Sundergarh, in Odisha. Land requirement will be 3245 acres, out of which main the plant area will be in an area of 1311 acres; ash disposal area & ash utilization facilities 1006 acres; and area for Township 144 acres. About 2423.89 acres of the total area is a single crop agriculture land; 309.65 acres consists of settlements; 68.88 acres is forest land; 199.05 acres is Gochar land; and 244.49 acres is others land which includes road, Pathar Chattan, Nallah/Pond & Barren land. About 785 acres of land is within 700m corridor from river bank which will be used for resettlement, afforestation, Gochar land etc. Land for MGR, Railway link and pipeline will be separately acquired. The co-ordinates of the site are located within Latitude 22°02'12" N to 22°04'31" N and Longitude 83°59'42"E to 84°01'58" E. Coal requirement will be 19-20 MPTA at 85% PLF. Coal will be obtained from Captive coal blocks of Meenakshi, Meenakshi B and Dip side Meenakshi, Orissa which have been allocated by Ministry of Coal vide letter dated 13.09.2006. These coal blocks are located about 40 kms from the proposed UMPP site. Ash and sulphur contents in coal will be 40% and 0.5% respectively. Water

requirement of 122 cusecs will be sourced from Hirakud reservoir through a pipeline at a distance of about 40 km from project site. Natural draft cooling system will be installed. 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 30.07.2010. Cost of the project will be Rs.16,000.00 Crores.

The Committee noted that in accordance with the existing policy decision taken by the Ministry vide O.M dated November 01, 2010 and its amendment dated April 19, 2012, the status of EC and FC of the linked coal block of this UMPP as on date is required to be known. A letter from the Secretary, Power, Govt. of India addressed to the Secretary, MoEF was also read for information of the members. The Committee decided that in pursuance to the existing policy decision taken by the Ministry, the proposal can only be taken up once the Ministry takes a decision on the contents of the aforementioned letter of the Secretary, Power.

The Committee however decided to peruse through the presentation made by the project proponent.

It was noted that land requirement appeared to be very large and need to be optimized strictly in accordance with the norms issued by CEA from time to time. Accordingly it was decided that area for ash dyke shall not exceed 600 acres initially and under any circumstances shall not exceed the norms prescribed by CEA from time to time. It was decided therefore that the project proponent shall submit revised layout and revise its documents strictly in consonance with revised land requirement suggested, clearly indicating location of power plant components and others such as greenbelt, coal stock area, ash dyke location with elevations, MGR route etc. Coal stock area which is located near the river shall also be re-located.

The Committee also decided that any community land such as Gouchar land, community pond etc., if falling in the plant site shall be avoided and if in case the same is unavoidable due to its sheer location, equal area of community land either Gouchar or pond shall be first developed for handing over to the community and details submitted. It was also noted that a nallah runs inside the plant site and diversion of the same shall be carried out such that natural drainage pattern is not affected.

The Committee therefore decided that details of nallah diversion and detailed hydrological study (surface hydrology) of the study area shall be submitted to inter-alia includes details on water availability for the UMPP throughout the year.

The Committee also observed that AAQ Data and others collected were prior to issue of TOR. The project proponent stated that it was submitted during the presentation for TOR before the Committee and the Committee had agreed considering that appropriate season data need to be collected but the same was not reflected in the minutes of the meeting.

On further perusal of the AAQ data, the Committee observed that there were minor deficiencies which could be an inadvertent or clerical error. It was however, decided that full one season data (between November to January, 2012) shall be collected and AAQ assessment and impacts analysis carried out. It was also decided that additionally data for two seasons as reported to be already available with the

project proponent shall be used for assessment of predicted impact on AAQ and details submitted.

On the issue of social impact assessment, the Committee observed that the information submitted was grossly inadequate and the project proponent did not appear to be seriously concerned. It was therefore decided that for a project of such a magnitude, a social impact assessment study shall be carried out by a reputed institute in the field such as Tata Institute of Social Science; XLRI, Jamshpur; IRMA, Anand etc. It was accordingly decided that CSR shall be revised and formulated based on need based assessment in the study area and activities proposed be explicitly spelt out along with financial allocation based on the SIA study got carried out as stated above.

The Committee also discussed the issues raised in the public hearing and the responses provided by the project proponent. The Committee noted that the minutes of the public hearing indicated major problems on the issue of likely impact due to ash and social unrest. The PAPs being in quite a large number and the response of the project proponent that compensation will be as per R&R Policy of Govt. of Orissa, 2006, is debatable since NPRR Policy of Govt. of India had been issued in 2007, and anything below the bench mark set by the NPRR Policy of Govt. of India would certainly not be acceptable. The major issues raised in the public hearing were regarding compensation; dust generation; local employment; health care facilities; afforestation programme etc. which need to be addressed suitably.

The Committee further noted that about 50% of the people in the area comprises of SC/STs and issues of tribal rights need clearly to be identified and implementation Action Plan drawn. It was also observed that the project site may comprise of scheduled area (tribal area) and acquisition and compliance of tribal rights etc. is a factor the project proponent clearly needs to furnish details of its total compliance which is a Constitutional provision.

The Committee finally decided that the following shall be complied/followed:

- i) Project proponent to optimize the land requirement strictly in accordance with the norms issued by CEA, area for ash dyke not to exceed 600 acres, to submit revised layout and revise documents strictly in consonance with revised land requirement suggested, clearly indicating location of power plant and other components such as greenbelt, coal stock area, ash dyke location with elevations, MGR route etc. Coal stock area which was earlier, located near the river to be re-located and indicated in the revise layout.
- ii) Community land such as Gouchar land, community pond etc. if falling in the project area shall be avoided and if in case the same is unavoidable due to their location, an equivalent area of community land, Gouchar or community pond shall be first developed in the vicinity for handing over to the community and details submitted.
- iii) Details of diversion of nallah running in the proposed plant site shall be submitted. It shall be ensured that the natural drainage pattern is not affected.

- iv) Details of hydrological study (surface hydrology) of the study area shall be carried out and submitted. The study shall include details on water availability for the UMPP for the full year including details during lean season.
- v) The project proponent shall explore possibility of attaining COC 6 to 7 instead of 5.
- vi) One full one season data (between November to January, 2012) shall be collected and AAQ assessment and impacts analysis carried out. Additionally data for two seasons as reported to be already available with the project proponent shall be used for assessment of predicted impact on AAQ and details submitted.
- vii) Cumulative impact assessment over 10 Km radius shall be carried out considering all existing and likely sources of emissions from other industries, TPPs including any other activities. The cumulative impact assessment shall include assessment of impact due to withdrawal of water for UMPP and other industrial use from the same source, on the downstream ecology of the river. Information of other competing sources of water shall also be submitted
- viii) Social impact assessment study shall be carried out by a reputed institute in the field such as Tata Institute of Social Science; XLRI, Jamshapur; IRMA, Anand etc. Accordingly CSR shall be revised and formulated based on need based assessment in the study area and activities proposed be explicitly spelt out along with financial allocation based on the SIA study.
- ix) Identify tribal rights involved and implementation action plan shall also be drawn. Accordingly tribal land acquisition and compliance of tribal rights details thereof and its compliance which is a Constitutional provision shall be furnished.
- x) To submit revised EIA/EMP or its addendum after incorporation of the above points both in hard and soft copy along with revised Form-I and other requisite documents as mentioned in the Ministry's Circular no. J-11013/19/2012-IA-II(I), dated March 20, 2012.

In view of the above missing essential gaps of information the Committee strongly felt decided that the proposal was too pre-mature for consideration of grant of environmental clearance. The Committee also decided that the project proponent shall revert with point-wise TOR compliance along with the compliance to the above mentioned specific issues with requisite maps and relevant documents for re-consideration. The proposal was accordingly deferred."

The project proponent has submitted an addendum to the EIA/EMP addressing the above along with the revised Form-I to MoEF in October, 2013. MoEF vide O.M dated 30.12.2013 has amended the earlier O.M dated 19.04.2012 by delinking the EC for UMPPs with the issue of EC and Stage-I FC of the linked coal block provided the coal blocks do not fall under the category of inviolate areas. The PP informed that the captive coal blocks of Meenakshi, Meenakshi B and Dip side Meenakshi in Orissa allocated by Ministry of Coal to the project do not fall under the category of inviolate areas. However, the same needs to be ascertained by the FC division of MoEF.

The project proponent made a presentation along with its consultant M/s Desein Private Ltd., Delhi and provided the following information as was sought earlier by the EAC:

W.r.t optimization of the land requirement for ash dyke, the land requirement for the ash dyke of the above power project shall not exceed 990 acres and 870 acres respectively as per the CEA guidelines of September 2010 and the MoEF Notification dated 03.11.2009, However, as per the directions of EAC, initially, 600 acres of area will be developed for ash dyke area and to meet any exigency, another 118 acres of area has also been kept reserved for the ash dyke area. Further, the land for ash utilization facilities has been optimized from 200 acres to 130 acres. A green belt of 158 acres will be developed around the ash dyke. The layout has also been revised demarking the power plant, coal stock area, ash dyke, green belt etc. and approx. 2.0 km distance has been maintained between the coal stock area and the River Bank.

An equivalent area (approx. 199 acres) of land lying between the plant boundary and River Bank will be handed over to the community for Gouchar land, community pond etc. after requisite development. The plant layout has been revised to retain the natural path of the nallah.

The surface hydrology study has been conducted by WAPCOS for the water availability at Hirakud Reservoir which reveals that water from Hirakud Reservoir can meet the requirement of the proposed TPP without affecting other commitments. The mean annual rainfall in the region is about 1381 mm and the down stream region experiences frequent cyclonic conditions with very heavy precipitation. These and other factors contribute to the sustenance and growth of flora and fauna down stream of Hirakud Dam.

As per the raw water analysis, the concentration of reactive silica and colloidal silica are 8.49 ppm and 1.4 ppm respectively. At COC of 6, the reactive silica level will increase to more than 50 ppm which can form hard silica scale of calcium and magnesium in the condenser tubes. There is little saving (400 m³/hr) of water in going for COC of 6 to 7. The system is designed based on COC of 5, but during operation, if feasible, the TPP would be operated on COC of 6.

One full season data (between November to January, 2012) was collected and AAQ assessment & impacts analysis were carried out. As per the AAQ predictions, the cumulative impacts of proposed UMPP and NTPC power plant in vicinity shall be only at locations A5 (Surda), A6 (Chhotbanga) and A7 (Bharatpur) in SW to SSW direction of UMPP only during the summer season. The AAQ data of 10 km area around the proposed UMPP in all the three seasons will remain within the prescribed NAAQS.

Study on social impact assessment, tribal rights compliance and CSR action plan was carried out by XLRI, Jamshedpur. An amount of Rs. 59 crores is proposed for various CSR activities which include education, drinking water facilities, electrification, health facilities etc. The Section 4 of PESA Act, 1996 has been totally complied. The consent of Gram Sabha was obtained for diversion of forest land as per the provisions under the Scheduled Tribes and other traditional Forest Dwellers (recognition of Forest Rights) Act, 2006. Gram Sabha was conducted with more than 50% participation and in compliance to their decision, 785 acres of excess land is being acquired.

The Committee deliberated at length on the information and clarifications provided by the Project Proponent and was of the view that further details on water

balance and water availability for the UMPP for the lean season needs to be submitted. It was also decided that comments of Dr. Attri on AAQ data and predictions needs to be obtained. Further detailed R&R plan shall also be submitted.

*In view of above, the committee **deferred** the proposal for further consideration after submission of the desired documents as sought.*

2.2 1x100 MW Phase-I Namrup Replacement Combined Cycle Power Project of M/s Assam Power Generation Corporation Ltd. at Namrup, District Dibrugarh, Assam – reg. Extension of validity of Environmental Clearance.

The project proponent did not attend the meeting and hence the proposal was deferred.

Any other item with the permission of the Chair

2.3 2x800 MW (Stage-I) Darlipali Supercritical Coal Based Thermal Power Plant of M/s NTPC Ltd. at Village Darlipali, in Lephripara Taluk, in Sundergarh Distt., in Orissa -reg. Environmental Clearance.

The proposal was earlier taken up in the 36th and the 40th Meetings of the EAC held during November 14-15, 2011 and January 9-10, 2012 respectively wherein the project proponent made a presentation along with its consultant M/s Kirloskar Consultants Ltd., Pune and provided the following information:

The proposal is for setting up of 2x800 MW (Stage-I) Supercritical Coal Based Thermal Power Plant at village Darlipali, in Lephripara Taluk, in Sundergarh Distt., in Orissa. Land requirement will be 1670 acres, 1278.74 acres is private land, 338.97 acres is Govt. land and 34.47 of forests land. The co-ordinates of the site are located within Latitude 21°52'57" N to 22°03'32"N and Longitude 83°49'29" E to 83°57'31"E. Coal requirement will be 8.0 MTPA. Coal will be domestic and will be obtained from Dulanga (7 MT) and Pakri Barwadih Coal Block (1 MT). About 7000 Tonnes/day fly ash and 1800 Tonnes/day bottom ash will be generated. Fly ash will be supplied to cement plant; fly-ash bricks; clay ash bricks; wasteland development; agriculture & Horticulture and Road development. Two Stacks of 275m shall be provided. Water requirement will be 4750 m³/hr and will be sourced from the Hirakund Reservoir on the Mahanadi River through a pipeline at a distance of about 30.0 km from project site. Commitment letter of Water linkage has been issued on 17.06.2006 by Govt. of Orissa. Closed Cycle cooling system with cooling tower will be installed. There are no National Parks, Wildlife Sanctuaries, Heritage Sites, Tiger/Biosphere reserves etc. within 10 km of the site. Public Hearing was held on 30.04.2011. Cost of the project will be Rs. 11396.95 Crores.

In the said meeting the Committee had noted that the land for the project involved forest land and copy of application for forestry clearance had not been submitted to MoEF.

The Committee had also noted that the project involved acquisition of large area of private agricultural land and poor villagers may be depending for their sustenance

on the few acres of land either owned or working on the said land. It was also noted that the project proponent have not submitted R&R for PAPs even though the project entails acquisition of large private land. It was therefore decided that a comprehensive R&R action plan with requisite details including financial parameters (for compensation, scheme for upliftment of marginalized section etc.) shall be submitted within four months. Detailed CSR Action Plan along with budgetary allocations also to be submitted within next four months.

That the data submitted for AAQ, water quality and others was for the duration of 2006-2007 which was pretty old. Current data should be furnished. Revised layout plan showing the green belt around the plant and MOU for ash utilization with proposals for full utilization within 4 years should be submitted to the Ministry. The Committee further had also noted that proposal in its present form was not in compliance to the TOR prescribed for the project.

The Committee in the said meeting, therefore, decided that the project proponent shall submit point-wise TOR compliance and also present in the same manner when the matter is again taken up on submission of the observation as noted above. Accordingly the proposal was deferred.

On submission of clarification and required information, the matter was again placed before the Committee.

The Committee noted that environmental clearance and forest clearance for Pakri Barwadih Coal Block has been obtained but for Dulanga Mine, the same are yet to be obtained. It was informed by the project proponent that environmental clearance for the said mine has been considered by the EAC and Forests clearance is under process. *The Committee decided that the Ministry may view the matter in accordance with its policy. The project also involves 13.95 ha of forest land. The forest clearance under the Forest (Conservation) Act, 1980 is yet to be granted. The proponent has submitted the document to DFO on 19.09.2011 for diversion of 13.95 ha.*

The Committee also discussed the issues raised in the Public Hearing and the responses made by the project proponent. The major issues raised were control of noise and dust emission during construction; protection of water bodies in the area; handling of radioactive waste; fugitive emissions from coal dust during transportation and its handling; maintenance of ash dyke; rights of people over Anabadi and forest land; land allotted to families by the then Chief Minister, now falling in the plant area; demand for taking over of surplus Rayati land; rehabilitation of landless farmers/villagers; demand for civic amenities such as health care facility, drinking water, educational institutions, free electricity; local employment; financing of SHGs; compensation for land at Rs 30 lakhs per acre etc. etc.

The project proponent were informed regarding the representation received from the Rehabilitation & Periphery Development Advisory Committee (RPDAC) members of Darlipali Integrated Super Thermal Power Plant Ltd. (DISTPL) pertaining to land acquisition. M/s NTPC explained the reasons for the complaint made purportedly with vested interest. The Committee, however, decided that the Ministry may provide a copy of the representation to the project proponent and obtain their response.

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

- i) Scheme for implementation for harnessing solar power within the premises of the plant particularly at available roof tops shall be prepared and status of implementation shall be submitted to the Ministry.
- ii) The project proponent shall undertake rain water harvesting measures and shall develop water storage for use in operation of the plant. Rain water harvesting system shall be put in place which shall comprise of rain water collection from the built up and open area in the plant premises. Action plan for implementation shall be submitted to the Ministry.
- iii) COC of 5.0 shall be adopted. Closed cycle cooling system with cooling towers shall be adopted.
- iv) Monitoring surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.
- v) Waste water generated from the plant shall be treated before discharge to comply to the limits prescribed by the SPCB.
- vi) Coal transportation shall be undertaken by rail and no road transportation shall be permitted.
- vii) Fly ash management shall be as per the fly ash utilization Notification, 1999 and its amendments in 2003 and 2009.
- viii) Ash pond water shall be re-circulated and utilized. 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 undertaken to protect the ash dyke from getting breached.
- ix) Provision shall be made for dry fly ash extraction and storage facilities. High concentration slurry disposal systems for un-utilized ash shall be made.
- x) The emission of particulate matter from the proposed thermal power plant shall not exceed 50 mg/Nm³ by installation of high efficiency ESP. A stack of height 275 Meters shall be provided.
- xi) An amount of Rs 46.0 Crore as one time investment during the construction phase of the project shall be earmarked for activities to be taken up under CSR. Recurring expenditure thereafter for CSR shall be Rs 9.10 Crores annually till the life of the plant. Detailed CSR Plan shall be submitted within four months as agreed to.
- xii) CSR schemes should address Public Hearing issues and shall be undertaken based on need assessment in and around the villages within 5 km of the site and in constant consultation with the village Panchayat and the District Administration. As part of CSR employment of local youth after imparting relevant training, as may be necessary, shall be undertaken as committed.
- xiii) It shall be ensured that an in-built monitoring mechanism for the CSR 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 the status of implementation of the scheme

- from time to time besides putting their programs along with budgetary allocation on company's website.
- xiv) Rights of tribals and others, whose sustenance is dependant on the land (if any) falling in the project area, shall be identified and protected in accordance with existing laws.
 - xv) Green Belt consisting of 3 tiers of plantations of native species around the plant of 100 m width shall be raised (except in areas not feasible). The density of trees shall not be less than 2500 per Ha and rate of survival atleast 80%. Additional green belt of appropriate density and width not less than 50 m atleast, shall be developed between the ash pond and the village facing the ash pond.
 - xvi) An Environmental Cell shall be created at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the head of the Cell shall directly report to the Head of the organization.

The Stage-I forest clearance for the 13.95 ha of forest land involved in the project site was accorded on 14.08.2013 and for the forest land in Dulanga coal mine was accorded on 10.01.2014. As per the O.Ms dated 9.9.2011 and 18.5.2012, since the project proponent could not submit the Stage-I forest clearance for the project site within the prescribed time limit of maximum 18 months, the matter was referred to EAC for having a relook on the proposal. The project proponent made a presentation before the EAC. It was informed that there is no change in the EIA/EMP submitted earlier and no new units have come up/proposed in the area.

Based on the information and clarifications provided by the Project Proponent, the Committee reiterated its earlier recommendations.

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