

**Government of India**  
**Ministry of Environment & Forests**

Paryavaran Bhavan, C.G.O. Complex,  
Lodi Road, New Delhi -110003.  
Dated: October 12, 2010.

To

**M/s Banas Thermal Power Pvt. Ltd.**

Plot No. - 270, Phase-III,  
Udyog Vihar, Gurgaon,  
Haryana-122 016.

**Sub: Proposed 1320 MW (2x660 MW) Coal Based TPP at village Sijehra, in Vijayraghavgarh Tehsil, in Katni Distt., in Madhya Pradesh - reg. TOR.**  
Sir,

The undersigned is directed to refer to your letter dated 13.07.2010 on the above mentioned subject.

2. It is to inform that the proposal was considered by the Expert Appraisal Committee during its 5<sup>th</sup> Meeting held during September 6-7, 2010, for determination of the Terms of Reference (TOR) for undertaking detailed EIA study in accordance with the provisions of the EIA notification dated **September 14, 2006**.

3. Based on the information provided by you with regard to the above mentioned project proposal, the Committee has prescribed the following Terms of Reference (TORs) for preparation of the Environmental Impact Assessment (EIA) Report and Environment Management Plan (EMP), in respect of your above mentioned project.

- i) Vision document specifying prospective long term plan of the site shall be formulated and submitted.
- ii) Executive summary of the project indicating relevant details along with photograph of site shall be provided and issues raised in public hearing along with action plan to address the same shall be provided in tabular form including requisite allocation of funds.
- iii) Authenticated map or a letter from concerned Chief Wildlife Warden certifying the distance of Bandavgarh Tiger Reserve buffer from the boundary of proposed site shall be obtained.
- iv) Conformity of the site with the prescribed guidelines in terms of distance of 500 m from HFL of the river, highways, railway line shall be shown on the study area map.
- v) The project proponent shall provide confirmed GPS readings of plant boundary.
- vi) No water body/nallah (if any) shall be touched. It shall also be ensured that atleast 100 m distance is kept away from the HFL of the nallah/ river (if any) passing in and around the proposed site.
- vii) Hydro-geological study of the area shall be conducted from an institute/ organisation of repute to assess impact of on ground and surface water regime. Specific mitigation measures shall be spelt out and action plan for implementation of the same shall be provided.
- viii) Source sustainability study of water requirement shall be carried out by an institute of repute. The study shall also specify the source of water for meeting the requirement during lean season and proposed plan of action.
- ix) Study on the impact on river/reservoir/marine ecology (as applicable) due to the proposed discharge of treated wastewater into the river/creek shall be carried out and submitted alongwith the EIA Report.
- x) Ash pond shall be shifted away as far as possible from any surface water source and its location shall be chosen taking into consideration the elevation and water drainage pattern in the area. The coordinates of the proposed site including location of ash pond shall be submitted along with topo sheet.
- xi) 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.
- xii) Layout of the plant indicating break-up of plant, green belt, infrastructure, roads etc. shall be provided.
- xiii) Land requirement for the project shall be optimized. Item wise break up of land requirement and its availability to be furnished. It should also include land to be acquired, if any, for coal transportation system as well as for laying of pipeline including ROW. It may clearly be confirmed that the land including ROW is free of all encumbrances. The issues relating to land acquisition and R&R should be clearly discussed in the EIA report.
- xiv) Land use based on satellite imagery or authenticated map indicating drainage, cropping pattern, water bodies (rivers, nallahs, ponds etc.), location of nearest villages, creeks, rivers, reservoirs, national parks, wildlife sanctuaries, tiger reserves, biosphere reserves, heritage sites etc in the study area shall be provided. Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes, if any, within 10 km of the project site shall be specified and marked on the map duly authenticated by the Chief Wildlife Warden.
- xv) Study on land-use pattern in the study area shall be carried out, including identification of common property resources available for conversion into productive land and action plan for abatement and compensation for damage to agricultural land/ common property land (if any) in the nearby villages, due to proposed project shall be prepared.
- xvi) Detailed socio-economic study shall be carried out for the study area comprising of 10 km from the plant site.
- xvii) CSR component shall be prepared based on need based assessment study to be carried out in the study area. Income generating measures which can help in upliftment of poorer sections of society which is consistent with the traditional skills of the people shall be identified. The programme can include activities such as development of fodder farm, fruit bearing orchards, vocational training etc. In addition, vocational training for individuals shall be imparted so that poorer sections of society can take up self employment and jobs. Separate budget for community development activities and income generating programmes shall be specified. Financial allocation to be taken up under CSR shall be specified.
- xviii) While formulating CSR schemes it shall be ensured that an in-built monitoring mechanism for the schemes identified is 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 plan for the status of implementation of the scheme from time to time.
- xix) Possibility for adopting nearest three villages shall be explored and details of civic amenities such as roads, drinking water, power etc proposed to be provided at the company's expenses shall be submitted.
- xx) Location of intake and outfall points (with coordinates) should be given. These locations should be selected based on detailed modeling studies. Details of modeling and the results obtained there from should be furnished. It may be kept in view that the intake and outfall points are away from the mangroves or other eco sensitive areas. A river/marine ecology study (as applicable) should also be done to assess impact on river/marine ecology. River/Marine impact of such activities should be clearly brought out in the EIA report.
- xxi) Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
- xxii) One complete season AAQ data (except monsoon) to be given along with the dates of monitoring. The parameters to be covered shall include SPM, RSPM(PM10,PM2.5), SO<sub>2</sub>, NO<sub>x</sub>, Hg and Ozone (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 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.
- xxiii) Cumulative impact assessment on ambient air quality due to proposed plant and others (including existing as well as other proposed source of emission) shall be carried out and result submitted in the EIA Report. Mitigative measures as necessary shall be clearly spelt out.
- xxiv) Impact of the project on the AAQ of the area. Details of the model used and the input data used for modelling should also be provided. The air quality contours may 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 this map.
- xxv) Fuel analysis shall be provided. Details of auxillary fuel, if any including its quantity, quality, storage etc should also be given.
- xxvi) Quantity of fuel required, its source and transportation route and mode and a confirmed fuel linkage documents shall be provided.
- xxvii) Source of water and its availability. Commitment regarding availability of requisite quantity of water from the competent authority shall be provided along with firm linkage.
- xxviii) Detailed plan for carrying out rainwater harvesting and proposed utilisation in the plant shall be provided.
- xxix) Feasibility of zero discharge shall be examined and detailed justification shall be submitted if in case the same is not possible. Proposed discharge (if any), its quantity, quality and point of discharge, users downstream etc. shall be provided.
- xxx) Optimization of COC for water conservation. Other water conservation measures proposed in the project should also be given. Quantity of water requirement for the project should be optimized.
- xxxi) Details of water balance taking into account reuse and re-circulation of effluents.
- xxxii) Detailed plan for conducting monitoring of water quality regularly and mechanism for maintenance of records shall be formulated. Details 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 in surface and ground water.
- xxxiii) Details regarding infrastructure facilities such as sanitation, fuel, restroom, 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.
- xxxiv) EMP to mitigate the adverse impacts due to the project along with item wise cost of its implementation.
- xxxv) A Disaster Management Plan 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 in 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 provided.
- xxxvi) Detailed plan for raising Green belt of 100 m width and consisting of at least 3 tiers around plant boundary with tree density not less than 2500 trees per ha and survival rate atleast 75% shall be submitted.
- xxxvii) Details of litigation pending or otherwise with respect to project in any courts, tribunal etc. shall be provided.

4. Besides the above, the following general points will be followed:

- a. All documents to be properly referenced with index, page numbers and continuous page numbering.
- b. Where data is presented in the report especially in table, the period in which the data was collected and the source should invariably be indicated.
- c. Where the documents provided are in a language other than English, an English translation should be provided.
- d. The Questionnaire for environmental appraisal of thermal power projects as devised earlier by the Ministry shall also be filled and submitted.
- e. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/ EMP reports prepared by them and data provided by other organization / Laboratories including their status of approvals etc. In this regard circular no. F.No. J-11013/77/2004-IA-II (I) dated 2<sup>nd</sup> December, 2009 is posted on the Ministry's website <http://www.moef.nic.in> may be referred.

In addition to the above, information on the following may also be incorporated in the EIA report.

1. Is the project intended to have CDM-intent?

(i) If not, then why?

(ii) If yes, then

- a. Has PIN (Project Idea Note) {or PCN (Project Concept Note)} submitted to the ?NCA? (National CDM Authority) in the MoEF?
- b. If not, then by when is that expected?
- c. Has PDD (Project Design Document) been prepared?
- d. What is the Carbon intensity? from your electricity generation projected (i.e. CO<sub>2</sub> Tons/MWH or Kg/KWH)
- e. Amount of CO<sub>2</sub> in Tons/year expected to be reduced from the baseline data available on the CEA's web-site ([www.cea.nic.in](http://www.cea.nic.in))

2. Notwithstanding 1(i) above, data on (d) & (e) above shall be worked out and reported.

5. **The Environmental clearance shall be applied only after firm fuel and water linkages are obtained.**

6. After preparing the Draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the same shall be submitted to the SPCB for conducting the public hearing as per procedure of EIA notification 2006. The issues emerged during public hearing shall be further incorporated in the Draft EIA/EMP report. The final EIA/EMP report along with public hearing report and the requisite documents (*including written objections, if any*) shall be submitted to the Ministry for appraisal by the Expert Appraisal Committee for consideration of awarding environmental clearance under the provisions of Environmental Impact Assessment notification dated September 14, 2006.

7. The TORs prescribed shall be valid for a period of two years for submission of EIA/ EMP reports, after public consultation.

Yours faithfully,

**(Dr. P.L. Ahujara)**  
**Director**

Copy to:

1. The Secretary, Department of Environment, Govt. of Madhya Pradesh.
2. The Chairman, Madhya Pradesh Pollution Control Board, Paryavaran Prisar, E-5 Arera Colony, Bhopal – 462 016
3. The Chief Conservator of Forests, Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Ravishankar Nagar, Bhopal - 462016.
4. Guard File.

**(Dr. P.L. Ahujara)**  
**Director**