

**BY SPEED POST**

No. J-13011/64/2007-IA.II(T)  
Government of India  
Ministry of Environment & Forests

Paryavaran Bhawan  
CGO Complex, Lodi Road  
New Delhi-110 003.

Dated: 5<sup>th</sup> February, 2008

To

M/s GMR Energy Ltd  
Skip Road, 25/1, Museum Road  
Bangalore- 560 025

**Sub: 1050 MW Thermal Power Project at Kamalanga, District  
Dhenkanal, Orissa by M/s GMR Energy Limited – Environmental  
Clearance Regarding.**

The undersigned is directed to refer to your communication no. GEL/Kamalanga/TOR/MOEF/074/07 dated 15.10.2007 regarding the subject mentioned above. Subsequent information furnished vide letter No.GEL/KTPP/BLR/MoEF/082/07 dated 29<sup>th</sup> November, 2007 have also been considered.

2. The proposal is for grant of environmental clearance under EIA Notification, 2006 for setting up of a 1050 MW (3x350 MW) thermal power project at Kamalanga, District Dhenkanal, Orissa. The land requirement for the project is 1050 acres, which includes 45 acres for colony and 474 acres for ash pond. Greenbelt will be raised in an area of 320 acres. An area of 65 acres for goucher land has been provided as alternate to the Goucher land acquired for this project. The coordinates of proposed project site are latitudes 20<sup>o</sup> 51' 23.652" to 20<sup>o</sup> 52' 37.092" and longitudes 85<sup>o</sup> 15' 22.1256" to 85<sup>o</sup> 16' 11.7942". Water requirement is 37 cusecs, which will be obtained from Brahamani river. Coal requirement is 15,840 TPD, which will be obtained from Mahanadi Coalfields from Talcher. No National Park or Wildlife Sanctuary is reported within 10 km of radius of the proposed power project. It is estimated that 3 houses would need to be relocated and there will be 812 land oustees due to the project. Total cost of the project is Rs 4100.00 crores, which includes Rs 150.00 crores for environmental protection measures.

3. The proposal has been considered and Ministry of Environment & Forests hereby accords environmental clearance to the said project under the provisions of

Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions:-

- (i) The total land requirement shall not exceed 1050 acres for all the activities/facilities of the power project.
- (ii) It shall be ensured that the project boundary is at least 500 m away from HFL of the river in conformity with the guidelines in this regard.
- (iii) The plant heat rate of around 2300 kcal/kwh shall be achieved and the coal consumption shall not exceed 660 TPH.
- (iv) Ash and sulphur contents in the coal to be used in the project shall not exceed 34% and 0.5% respectively.
- (v) A multi-flue stack of 275 m height with exit velocity of not less than 21 m/s shall be provided with continuous online monitoring system.
- (vi) High efficiency Electrostatic Precipitators (ESPs) with efficiency not less than 99.9% shall be installed so as to ensure that particulate emissions do not exceed 50 mg/Nm<sup>3</sup>.
- (vii) Appropriate mitigation measures shall be adopted to reduce the emissions of SO<sub>2</sub>. It shall be ensured that at no point of time the ground level concentration of SO<sub>2</sub> in the impact zone exceeds the prescribed limit. The proponent shall now itself also provide space for installation of FGD or other suitable measures, if required at a later stage.
- (viii) Water requirement shall not exceed 37 cusecs. No ground water shall be extracted for the project at any stage including during construction.
- (ix) COC of not less than 5 shall be adopted.
- (x) Closed circuit cooling system with Induced draft cooling towers shall be provided.
- (xi) Waste water generated shall be recycled and reused in the plant premises. There shall be no discharge of waste water out side the plant boundary except during monsoon.
- (xii) For controlling fugitive dust, regular sprinkling of water in the coal handling area and other vulnerable areas of the plant shall be ensured.
- (xiii) The project authorities should adhere to the provisions stipulated in the fly ash notification of September, 1999 and as amended in August, 2003 in regard to fly ash utilization. Fly ash shall be collected in dry form. Balance fly ash shall be

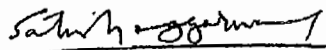
disposed off in the ash pond through HCSD mode and bottom ash through medium slurry mode.

- (xiv) The ash pond shall be lined with impervious lining to avoid any leaching into groundwater. The ash dyke shall be so designed and strengthened to ensure guard against breaching. Adequate safety measures shall also be taken so that pond ash does not become air borne to cause air pollution in the surrounding areas.
- (xv) R&R plan for land oustees and homestead oustees shall be prepared in consultation with the State Revenue Authorities and implemented effectively. The R&R plan shall be prepared before starting work on the project and implemented simultaneously with the start of development/ construction work on the project. A copy of the R&R plan shall also be submitted to this Ministry within three months of the issue of this letter.
- (xvi) The District Collector / Revenue Divisional Commissioner shall be informed regarding R&R and all other benefits to be provided by the project proponent and their effective implementation shall be overseen by the District Authorities.
- (xvii) Rain water harvesting should be adopted. Central Groundwater Authority / Board shall be consulted for finalization of appropriate rain water harvesting technology within a period of three months from the date of clearance.
- (xviii) Regular monitoring of ground water quality including heavy metals shall be undertaken around ash dyke and the project area to ascertain the change, if any, in the water quality due to leaching of contaminants from ash disposal area.
- (xix) A greenbelt shall be developed all along the plant and ash pond boundary covering a total area of at least 320 acres.
- (xx) An alternate Goucher land shall be developed in the identified 65 acres of land for use of the villagers for grazing of their cattles. The District Authorities and the villagers shall be informed of the same for its effective utilization.
- (xxi) First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (xxii) Leq of Noise level should be limited to 75 dBA and regular maintenance of equipment be undertaken. For people working in the high noise areas, personal protection devices should be provided.
- (xxiii) Regular monitoring of the ambient air quality shall be carried out in the impact zone and records maintained. The location of the monitoring stations and

frequency of monitoring shall be decided in consultation with SPCB. Quarterly reports shall be submitted to the Regional Office of this Ministry.

- (xxiv) The project proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board/Committee and may also be seen in the Website of the Ministry of Environment and Forests in the <http://envfor.nic.in>.
  - (xxv) A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.
  - (xxvi) Half yearly report on the status of implementation of the conditions and environmental safeguards should be submitted to this Ministry, the Regional Office, CPCB and SPCB.
  - (xxvii) Regional Office of the Ministry of Environment & Forests located at Bhubaneswar will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report, Environment Management Plan and the additional information / clarifications submitted subsequently should be forwarded to the Regional Office for their use during monitoring.
  - (xxviii) Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. These cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.
  - (xxix) Full cooperation should be extended to the Scientists/Officers from the Ministry and its Regional Office at Bhubaneswar/ the CPCB / the SPCB during monitoring of the project.
4. The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry.
  5. The environmental clearance accorded shall be valid for a period of 5 years to start of production operations by the power plant.
  6. In case of any deviation or alteration in the project proposed from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.

7. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.

  
(DR. S.K. AGGARWAL)  
DIRECTOR

**Copy to:-**

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
2. The Secretary, Environment and Forests Department, Govt. of Orissa, Bhubaneswar- 751 001.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Orissa State Pollution Control Board, A/118, Nilkantha Nagar, Unit-8, Bhubaneswar- 751012 - with request to display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office for 30 days.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
6. The Chief Conservator of Forests, Eastern Regional Office, Ministry of Environment & Forests, 194, Kharvela Nagar, Bhubaneswar-751001.
7. Director (EI), MOEF.
8. Guard file.
9. Monitoring file.

  
(Dr. S.K. AGGARWAL)  
Director