

BY SPEED POST

No. J- 13011/41/2006-IA.II(T)
Government of India
Ministry of Environment & Forests

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

Dated: 2nd March, 2007

To

The Chief Executive
Coastal Gujarat Power Ltd
Chandralok, 36, Janpath,
New Delhi- 110 001

Sub: 4000 MW Mundra Ultra Mega Thermal Power Project at village Tunda, near Mundra, district Kutchh by M/s Coastal Gujarat Power Ltd.- Environmental Clearance reg.

Sir,

The undersigned is directed to refer to your communication no. 03:07:UMPP:CGPL:Mundra dated 10th November, 2006 regarding the subject mentioned above. Subsequent information furnished vide letters no. 03:07 UMPP:CGPL:Mundra dated 08.12.2006 and 05.01.2007 have also been considered.

2. It is noted that the proposal is for grant of environmental clearance under the provisions of EIA Notification, 1994 to set up an Ultra Mega Power Project of 4000 MW capacity at Tunda Village, near Mundra, District Kutchh, Gujarat using imported coal as fuel. The size of individual units has, however, not been decided yet. The unit size may vary between 500 – 1000 MW each. Ash and Sulphur content in the imported coal will be 10% and 1% respectively. The coordinates of the Main Plant Area are corner 1: 22° 49' 48" N 69° 30' 58" E; Corner 2: 22° 49' 43" N 69° 32' 24" E; Corner 3: 22° 48' 48" N 69° 32' 33" E; Corner 4: 22° 48' 38" N 69° 31' 03" E. Total land requirement including land required for MGR system and intake and out fall channels is 1242 ha which includes 130 ha of forest land. The area is not a low lying area and the site is above high tide line with elevation ranging from 3.5 m – 8.0 m. No filling is required. The elevation of HTL is reported to be 2.5 m. The proposed site has no habitation. R&R is not involved. No ecologically sensitive area like national parks, wildlife sanctuary is reported within 10 km radius. Public hearing

for the project was held on 19.09.2006. The project cost is Rs 18,000.00 crores including Rs 200.00 crores for environmental protection measures.

3. The proposal has been considered in accordance with para 12 of the EIA Notification dated 14th September, 2006 read with sub clause (i) (a) of clause 2.2.1 of the Circular no. J-11013/41/2006-IA.II (I) dated 13th October, 2006 and environmental clearance is hereby accorded under the provisions there of subject to implementation of the following terms and conditions:

- (i) Comprehensive EIA study shall be carried out based on full one year data and submitted to MoEF within 15 months. Based on the same, air quality modeling shall be carried out. In case the modeling results show ground level SO₂ concentration exceeding 80 ug/m³ at any location in the impact zone or the sulphur content in coal is to ever exceed 1%, FGD shall be installed.
- (ii) Space provision shall be made for Flue Gas De-sulphurisation (FGD) unit, if required at a later stage.
- (iii) Physical modeling shall be carried out through one of the expert organization / institution like CWPRS with the following objectives:
 - a) The activity does not affect the flow regime.
 - b) To determine the intake and outfall locations.
 - c) To determine the mode (i.e. open channel or closed channel) for drawl of water.
 - d) Hydraulic and thermal regime is not affected.
 - e) Sensitive areas such as mangroves, corals and aquatic flora and fauna are not affected.
- (iv) Based on the above said modeling study, the locations of intake and outfall point and the mode for drawl of water shall be finalized prior to start of the work on the project.
- (v) For the activities in the CRZ area, necessary clearance under CRZ Notification as may be applicable shall be obtained prior to start of the work on the project.
- (vi) A dredging plan showing the quantity of dredge material likely to be generated by capital dredging and maintenance dredging and the mode of disposal of the dredge material shall be submitted to MoEF at least 6 months prior to the commencement of the dredging operations and the project proponent shall abide by such directions as may be given by the Ministry on its environmental aspects.
- (vii) No land filling of the site shall be carried out.

- (viii) The total land requirement shall not exceed 1242 ha for all the activities / facilities of the power project put together.
- (ix) The land requirement, which has been added from that proposed originally, shall be reconciled at the stage of issue of Notification for land acquisition under Section 6.
- (x) Imported coal consumption shall not exceed 12 Million tonnes per annum and the ash and sulphur content in the coal to be used in the project shall not exceed 10% and 1.0% respectively.
- (xi) Two bi-flue and one single flue stacks of 275 m height each shall be provided with continuous online monitoring equipments. Exit velocity of 25 m/sec shall be maintained.
- (xii) High efficiency Electrostatic Precipitator (ESP) with efficiency not less than 99.9 % shall be installed to ensure that particulate emission does not exceed 100 mg/Nm³.
- (xiii) Low NO_x burners shall be provided. ←
- (xiv) Adequate dust extraction and dust suppression system such as bag filters and water spray system in dusty areas such as coal and ash handling areas, transfer areas and other vulnerable areas shall be provided.
- (xv) Fly ash shall be collected in dry form and shall be used in a phased manner as per provisions of the notification on Fly Ash Utilization issued by the Ministry in September, 1999 and its amendment. By the end of 9th year full fly ash utilization should be ensured. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry.
- (xvi) Ash pond shall be lined with impervious lining. ←
- (xvii) Rain water harvesting shall be practiced. A detailed scheme for rain water harvesting to recharge the ground water aquifer shall be prepared in consultation with Central Ground Water Authority / State Ground Water Board and a copy of the same shall be submitted within three months to the Ministry.
- (xviii) Closed Cycle Cooling System with cooling towers shall be adopted. The treated effluents shall conform to the prescribed standards before discharge.
- (xix) Regular monitoring of ground water in and around the ash pond area shall be carried out, records maintained and periodic reports shall be furnished to the Regional Office of this Ministry.

- (xx) A 100 m wide greenbelt will be developed all around the plant, ash pond and township site covering one third ($1/3^{\text{rd}}$) of total project area under greenbelt development.
- (xxi) Conservation and development of mangroves species found in this area shall be taken up with a conservation plan duly approved by the State Forest Department.
- (xxii) Infrastructure facilities including first aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (xxiii) 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.
- (xxiv) The proposed configuration of the project (5x800 MW) could be changed provided that the total capacity of the power plant shall not exceed 4000 MW and that no individual unit shall be less than 500 MW.
- (xxv) Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry.
- (xxvi) The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned, 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 at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>.
- (xxvii) A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.
- (xxviii) Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry, its Regional Office, CPCB and SPCB.
- (xxix) Regional Office of the Ministry of Environment & Forests located at *Bhopal* will monitor the implementation of the stipulated conditions. A complete set of Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted to MoEF from time to time shall be forwarded to the Regional Office for their use during monitoring.

(xxx) Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. This cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to this Ministry and its Regional Office.

(xxxi) The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and dates of start of land development work and commissioning of plant.


(xxxii) Full cooperation shall be extended to the Scientists/ Officers from the Ministry/Regional Office of the Ministry at *Bhopal* /the CPCB/the SPCB who would be monitoring the compliance of environmental status.

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 the start of production operations by the power plant.

6. In case of any deviation or alteration in the proposed project from that submitted to this Ministry for clearance, a fresh reference shall 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 shall be enforced along with others as 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, The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989, Hazardous Wastes (Management and Handling) Rules, 1989, the Public Liability Insurance Act, 1991 and rules there under and the EIA Notification, 2006 and the amendments made therein from time to time.


(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 & Forests Department, Government of Gujarat, Sachivalaya, 8th Floor, Gandhi Nagar-382010 (Gujarat).
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Gujarat Pollution Control Board, Paryavaran Bhawan, Sector 10-A, Gandhi Nagar-382010 - **with a 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, Western Regional Office, Ministry of Environment & Forests, E- 5, Arera Colony, Link Road -3, Ravishankar Nagar, Bhopal-462016.
7. Director (EI), MOEF.
8. Guard file.
9. Monitoring file.

(Dr. S.K. Aggarwal)
DIRECTOR

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No.J-13011/41/2006-IA.II(T)
Government of India
Ministry of Environment & Forests

Paryavaran Bhavan,
C.G.O. Complex, Lodi Road,
New Delhi-110003.
Tel. 2436 2434

Dated the 5th April, 2007

To

The Chief Executive
Coastal Gujarat Power Ltd.,
Chandralok, 36, Janpath,
New Delhi-110 001.

CORRIGENDUM

Sub: 4000 MW Mundra Ultra Mega Thermal Power Project at village Tunda, near Mundra, District Kutchh by M/s Coastal Gujarat Power Ltd. – Environmental Clearance – Regarding.

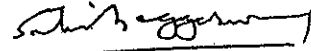
The undersigned is directed to refer to your letter no. 03:07:UMPP:CGPL:Mundra dated 22nd March, 2007 regarding the subject mentioned above. The contents of the above referred letter have been examined. The conditions no. (iv), (v) and (xviii) stipulated in this ministry's clearance letter of even no. dated 2nd March, 2007 are hereby amended to read respectively as follows:

- Condition No. (iv):** Based on the above said modeling study, the locations of intake and outfall point and the mode for drawl of water shall be finalized prior to start of the work on the intake and out fall channels.
- Condition No. (v):** For the activities in the CRZ area, necessary clearance under CRZ Notification, as may be applicable, shall be obtained prior to start the work on such activities.
- Condition No. (xviii):** Suitable system shall be provided to reduce water temperature at the final discharge point so that the resultant rise in the temperature of receiving water does not exceed 7^o C over and above the ambient temperature of the receiving water body.

All other conditions contained in the environmental clearance letter dated 2nd March, 2007 shall remain unchanged.

This issues with the approval of the Competent Authority.

Yours faithfully,



(Dr. S.K. Aggarwal)
Director

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1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
2. The Secretary, Environment & Forests Department, Govt. of Gujarat, Sachivalaya, 8th Floor, Gandhi Nagar-382010 (Gujarat).
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110 066.
4. The Chairman, Gujarat Pollution Control Board, Paryavaran Bhawan, Sector 10-A, Gandhi Nagar-382010.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
6. The Chief Conservator of Forests, Western Regional Office, Ministry of Environment & Forests, E-5, Arera Colony, Link Road-3, Ravishankar Nagar, Bhopal-462016.
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(Dr. S.K. Aggarwal)
Director