

No.11-11/2007 – IA- III
Government of India
Ministry of Environment and Forests
(IA-III Division)

Paryavaran Bhavan
CGO Complex. Lodhi Road.
New Delhi – 110003.
Dated the 25th April, 2007

**Sub: Ultra mega power project of M/ s Coastal Gujarat Power Limited
at Mundra –drawal and disposal of sea water facilities in
Coastal regulation zone –regarding.**

Reference is invited to the letter No. ENV-10-2006-184-P, dated 8.2.2007 from Forests and Environment Department, Government of Gujarat regarding the subject mentioned above. Subsequent information furnished vide letter No. 03:07:UMPP:CGPL:Mundra, dated 7.3.2007 from Environment Department, Government has also been considered.

The project pertains to laying of intake and outfall point for the ultra mega power project at Mundra by M/s. Coastal Gujarat Power Limited. It was indicated that the main project relating to the thermal power project has been cleared by the Ministry on 2.3.2007. The thermal power plant is located outside the CRZ area on the landward side. The Ministry has also accorded clearance to the 4000 MW Mundra, Ultra Mega Thermal Power Project vide refletter No. J-13011/41/2006 IA-II(T) dated 22.3.2007 and 5.4.2007. The plant is located 1.5 Kms. from the coast. The present proposal pertains to laying of the intake and outfall channel for the coal based 4,000 MW power project is being located near Tunda Wand Village in Mundra Taluk of Kuchchh District. The water would be drawn from Kothi creek and the outfall is at Mudhwa creek. The width of the canal is 30mts. With regard to the intake channel, the sea water will be drawn through an open channel excavated to a depth of 3Mts. below CD (LTL) which is -6.4 m MSL. The outfall length of the intake channel is 6.5 kms. with distinct reaches as below:-

- ▶ Reach 1: Channel from plant to Kotdi creek with a length of 3 km.
 - Base width = 80 m, top width = 150 m
 - Minimum side slopes of 1 V: 3 H required. Bottom level at plant El(-) 8 m (MSL)
 - Impervious lining like geo membrane lining
 - Access bridge – movement of local populace

- ▶ Reach 2: Channel aligned through Kotdi creek till -3 CD length ~ 3.5 km
 - Minimum width of channel = 100 m by widening wherever required.
 - Maximum deepening ~ 2 - 3 m

- Sea bed to be composed of loose material like sand and silt, flat side slopes like 1V:3H required. Flat channel side slopes to ensure stability of slopes under dynamic sea conditions.

With regard to the discharge channel proposed to be aligned through Mudhwa.

- ▶ Reach 1: From plant boundary to Mudhwa creek (1.9 km.)
 - To be used as a pre-cooling channel and will terminate in an end weir structure at creek.
 - Geo membrane lining to prevent contamination of ground water,
 - Channel and end weir to be designed to ensure temperature of water being discharged meets necessary stipulations of Ministry of Environment and Forests.
- ▶ Reach 2 – From creek to sea till 1 m below CD (3 km)
 - Channel in this reach to be approximately 2 to 3 m deep and to have base width of 60 m.

For the plant sea water would be directly used for condenser, cooling and freshwater requirement would be met by the installation of thermal desalination plant or RO plant. The daily seawater requirement of the proposed thermal power plant including freshwater is around 112,50,237 m³/day. The width of the channel required would be about 100 m to draw an estimated cooling water flow of 500,000 m³/hr. The channel would be aligned southwards from the southwest corner of the plant site. The discharge water is expected to have temperature of less than 7°C above ambient sea water temperature. No reclamation in intertidal area would be taken up. The dredge material will be utilized for road, MGR, ash pond bund and in colony to the extent of 54.2 lac m³. The fishermen movement in the area is negligible. No navigational route exists. However, for safety purposes marker buoys would be placed. Afforestation of mangroves would be taken up at suitable locations along the side slopes of the intake channel to stabilize the channel. The Ash pond is to be located outside CRZ area about 3 km away.

The proposal has been examined in the Ministry of Environment and Forests and environmental clearance to the project is hereby accorded subject to effective implementation of the following conditions:

- i. Specific conditions:**
 - (i) Continuous monitoring of the temperature at the discharge point should be provided.
 - (ii) Area for mangrove afforestation and the cost earmarked for the afforestation measures should be provided.
 - (iii) It shall be ensured that no fly ash/slurry from the flyash pond would be disposed of in the CRZ area or through the outfall channel.

- (iv) The fishing activities and movement of fishermen on the coast should not be affected. Appropriate measure such as bridges or walkways over the channel should be provided.
- (v) No Objection Certificate from the Gujarat State Pollution Control Board should be obtained before starting the project.
- (vi) The end of discharge weir shall be designed to ensure that the tidal water does not find its way into the pre-cooling channel. Further, it shall be ensured that the hot water discharge is uniformly spread over the radial region in front and mixing of warm water with the ambient receiving water is maximum.
- (vii) Necessary precaution shall be taken to have uniform flow in the pre-cooling channel in order to achieve better heat dissipation. For this purpose desilting operation be carried out periodically.
- (viii) Tree/mangrove plantation in the vicinity of the project site and particularly in the vicinity of pre-cooling channel should be undertaken as it would enhance the rate of heat dissipation to atmosphere.
- (ix) Effective steps shall be taken to ensure that there are no adverse effects on the shoreline wing during construction and operation of the channel.
- (x) Mangroves in the area will not be destroyed in any manner.
- (xi) Mangrove plantation should be taken up along the channel.
- (xii) Bunds may be designed and constructed to ensure minimum obstruction to the tidal flow.
- (xiii) The water quality should be monitor and stipulated values be maintained all times devising suitable systems.
- (xiv) The intake and outfall systems should not cause any hardship to the local fishermen and should not interfere with the breeding and spawning grounds of fish and other marine fauna.
- (xv) The canal should be constructed in such a manner that no percolation takes place to the ground water.
- (xvi) No landfill sites shall be located in Coastal Regulation Zone areas. The sediment removed from the channel shall be disposed of in the identified landfill sites approved by the Gujarat State Pollution Control Board.
- (xvii) It shall be ensured that the cooling water before discharged shall conform to the standards laid down by Gujarat State Pollution Control Board and Central Pollution Control Board.
- (xviii) The project affected people, if any, should be properly compensated and rehabilitated.

B. General Conditions:

- i. Construction of the proposed structures should be undertaken meticulously conforming to the existing local and central rules and regulations including Coastal Regulation Zone Notification, 1991 and its amendments. All the construction designs/drawings relating to the proposed construction activities must have approvals of the concerned State Government Departments/Agencies.
- ii. A well equipped laboratory with suitable instruments to monitor the quality of air and water shall be set up so as to ensure that the quality of ambient air and water conforms to the prescribed standards. The laboratory will also be equipped with

- qualified man power including a marine biologist so that the marine water quality is regularly monitored in order to ensure that the marine life quality is regularly monitored in order to ensure that the marine life quality is not adversely affected as a result of implementation of the said project. The sedimentation pollution in the proposed channel shall be studied regularly and necessary measures taken for removal of such sediments. The quality of ambient air and water shall be monitored periodically in all the seasons and the results should be properly maintained for inspection of the concerned pollution control agencies. The periodic monitoring reports at least once in 6 months must be sent to this Ministry (regional office at Bhopal) and State Pollution Control Board.
- iii. The project authorities should take appropriate community development and welfare measures for the villagers in the vicinity of the project site, including drinking water facilities. A separate fund should be allocated for this purpose.
 - iv. The quarrying material required for the construction purpose shall be obtained only from the approved quarries/burrow areas. Adequate safeguard measures shall be taken to ensure that the overburden and rocks at the quarry site does not find their way into water bodies.
 - v. For employing unskilled, semi-skilled and skilled workers for the project, preference shall be given to local people.
 - vi. The recommendations made in the Environment Management Plan and Disaster Management Plan as required in the Environmental Impact Assessment and Risk analysis Reports of the project shall be effectively implemented.
 - vii. A separate Environment Management Cell with suitably qualified staff to carry out various environment related functions should be set up under the charge of a Senior Executive of the Company.
 - viii. The funds earmarked for the Environment protection measures, should be maintained in a separate account and there should be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards should be reported to this Ministry.
 - ix. Full support should be extended to the officers of this Ministry's Regional Office at Bhopal and the officers of the Central and State Pollution Control Boards by the project proponents during their inspection for monitoring purposes by furnishing full details their inspection for monitoring purposes by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.
 - x. In case of deviation or alteration in the project including the implementing agency, a fresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection. The project proponents should be responsible for implementing the suggested safeguard measures.
 - xi. This Ministry reserve the right to revoke this clearance, if any, of the conditions stipulated are not complied with to the satisfaction of this Ministry.

- xii. This authority or any other competent authority may stipulate any other additional conditions subsequently, if deemed necessary for environmental protection which shall be complied with.
- xiii. The project proponent should advertise at least in 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 and may also be seen at the website of the Ministry of Environment and Forests at <http://www.envfor.nic.in>
- xiv. The project proponents should inform the Regional Office as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities and date of start of Land Development Work.

The above mentioned stipulations will be enforced among others under the provisions the Water (Prevention and control of Pollution) Act 1974 , the Air (Prevention and control of Pollution) Act, 1981 and the Environment Protection Act, 1986, the Hazardous Chemicals (Manufacture, Storage and Import) Rules, 1989, The Coastal Regulation Zone Notification, 1991 as amended in 1994 and July 1997 and the Public Liability Insurance Act, 1991 and the rules made there under from time to time. The project proponents should also ensure that the proposal complies with the approved Coastal Zone Management Plan of Gujarat State and the Supreme Court's order dated 18th April 1996 in the Writ Petition No. 664 of 1936 to the extent the same are applicable to the proposal.

Sd / -
(Dr. A. Sentil Vel)
Additional Director

To:
Shri K K P Bhonde
Additional General Manager
Power finance Corporation Limited,
Chandralok, 36, Janpath, New Delhi-1.

Copy to

- (i) Chief Conservator of Forests, Ministry of Environment and Forests, Regional Office (WZ), Kendriya Paryavaran Bhavan, Link Road no.3 Ravishankar Road, Bhopal – 462016.
- (ii) The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex. East Arjun Nagar, Delhi – 110032.
- (iii) Shri J K Vyas, Director (Environment), Government of Gujarat, Forests and Environment Department, Block no. 14, 8th floor, Sachivalaya, Gandhi nagar – 382010
- (iv) The chairman, Gujarat State Pollution Control Board, Paryavaran Bhavan, Sector-10A, Gandhinagar – 3820104.

- (v) DH 3, Regional Office cell, Ministry of Environment and Forests, New Delhi.
- (vi) Guard File
- (vii) Monitoring cell
- (viii) Director (EI) Ministry of Environment and Forests, New Delhi.

Sd / -
(Dr A. Senthil Vel)
Additional Director