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BY SPEED POST

F. No. J-13011/24/2008-IA.II(T)
Government of India
Ministry of Environment & Forests

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

Dated : 11th July, 2008

To

M/s Talwandi Sabo Power Limited
PSEB Building, The Mall
Patiala- 147 001

Sub: 2000 MW (4x500 MW) Talwandi Sabo Thermal Power Project near
Banawala, District Mansa, Punjab by M/s Talwandi Sabo Power Ltd -
Environmental Clearance regarding.

Sir,

The undersigned is directed to refer to your communication no. 65 dated 11th March, 2008 regarding the subject mentioned above. Subsequent information furnished vide letter dt. 9.5. 2008 has also been considered.

2. It is noted that the proposal is for grant of environmental clearance for setting up of a 2000 MW (4x500 MW) thermal power project near village Banawala, District Mansa, Punjab. The units will be of 500 MW each based on sub critical technology. Coordinates of the site are 29° 53' 31" to 29° 56' 10" N and 75° 12' 53" to 75° 15' 11" E. The land requirement is 2105 acres including water reservoir, CHP area and greenbelt area. Coal requirement is estimated as 8.7 million TPA, which will be obtained from MCL mines in Ib Valley. Coal will be transported by rail. Water requirement is estimated as 7100 m³/hr, which will be obtained from Bheni sub-branch of Kotla canal branch at a distance of 20 km. Auxiliary fuel i.e. LDO and HFO/LSHS will be required for start up and flame stabilization purpose. Ground water level in the area varies from 2.92 mbgl to 12.77 mbgl. Orchards are reported in the vicinity of the area. There will be 10440 PAPs of 1746 households due to this project. The public hearing for the project has been held on 29.1.2008. No ecologically sensitive area is located within a radius of 10 km from the plant boundary. Total cost of project is Rs. 8000.00 crores which includes Rs. 461.00 crores for environmental protection measures.

3. The proposal has been considered by the Expert Appraisal Committee for Thermal Power and Coal Mine projects 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 for the project shall be restricted to 2105 acres.
- (ii) Requisite quantity of coal for the ultimate capacity shall be obtained before commissioning the project.
- (iii) Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5% and 34% respectively.
- (iv) A bi-flue stack of 275 m height shall be provided with continuous online monitoring equipments for Sox, NOx and Particulate. Exit velocity of flue gases shall not be less than 25 m/sec.
- (v) High efficiency Electrostatic Precipitator (ESP) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm³.
- (vi) Space provision shall be kept for retrofitting of FGD, if required at a later date.
- (vii) Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.
- (viii) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Fly ash 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 fly ash shall be disposed off in the ash pond in the form of High Concentration Slurry and the bottom ash in conventional slurry mode.
- (ix) Ash pond shall be lined with HDPE lining. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.
- (x) Closed cycle cooling system with cooling towers shall be provided. COC of at least 5 shall be adopted and the effluents shall be treated as per the prescribed norms.
- (xi) The treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.

- (xii) A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.
- (xiii) 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 and details shall be furnished.
- (xiv) Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry at Chandigarh.
- (xv) Storage facilities for liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area where risk is minimum to the storage facilities. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place. Mock drills shall be conducted regularly and based on the same, modifications required, if any shall be incorporated in the DMP.
- (xvi) Regular monitoring of ground water in and around the ash pond area shall be carried out, records maintained and six monthly reports shall be furnished to the Regional Office of this Ministry.
- (xvii) A green belt of adequate width and density shall be developed around the plant periphery covering about 1/3 of the project area preferably with local species.
- (xviii) Activities under CSR shall be enhanced with proper financial allocation. Details of these activities shall also be submitted to the Regional Office of the Ministry, SPCB and the Ministry.
- (xix) First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (xx) Leq of Noise levels emanating from turbines shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas.
- (xxi) Regular monitoring of ground level concentration of SO₂, NO_x, SPM and RSPM shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. 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.

- (xxi) 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 within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter 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>.
 - (xxii) A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
 - (xxiii) Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry/ Regional Office/CPCB/SPCB.
 - (xxiv) Regional Office of the Ministry of Environment & Forests located at Chandigarh will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.
 - (xxv) Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These 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 the Ministry.
 - (xxvi) 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 the dates of start of land development work and commissioning of plant.
 - (xxvii) Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Chandigarh /the CPCB/the SPCB who would be monitoring the compliance of environmental status.
4. The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. MOEF may impose additional environmental conditions or modify the existing ones, if necessary.
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 add 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 .

8. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.



(Dr. S. BHOWMIK)

ADDITIONAL DIRECTOR

Copy to:-

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi - 110001.
2. The Secretary, Science, Technology & Environment Deptt., Government of Punjab, Punjab Civil Secretariat, Chandigarh.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Punjab Pollution Control Board, Vata Varan Bhawan, Nabha Road, Patiala, Punjab-147 001 - 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, Northern Regional Office, Ministry of Environment & Forests, SCO 132-133, Sector 34-A, Chandigarh-160022.
7. The Director (EI), MOEF.
8. Guard file.
9. Monitoring file.



(Dr. S. BHOWMIK)

ADDITIONAL DIRECTOR