

**BY SPEED POST**

No. J 13011/62/2008 -IA.II(T)  
Government of India  
Ministry of Environment & Forests

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

Dated: 3<sup>rd</sup> June,, 2009

To

M/s NTPC Tamil Nadu Energy Company Ltd.  
NTPC Bhawan, Core- 7, Institutional Area  
Lodi Road, New Delhi-110 003

Sub: 500 MW Vallur Thermal Power Project Stage-I, Phase-II at Vallur, Tamil Nadu  
by M/s NTPC Tamil Nadu Energy Company Ltd - Environmental clearance  
regarding

Sir,

The undersigned is directed to refer to your communication no. Nil dated 21.3.2008 regarding the subject mentioned above. Subsequent information furnished vide letters No. NTECL/CEO/2008/MOEF/01 dt. 28.07.2008, no. CC:ESE:261:2009:04C dt. 4.3.2009 and 16.4.2009 have also been considered.

2. It is noted that the proposal is for grant of environmental clearance for setting up of a 500 MW thermal power project as stage-I, phase-II at Vallur, Tamil Nadu. Environmental clearance for two units of 500 MW under phase-I was granted in April, 2007. No additional land is required for the main plant , however, 140 acres land is required for ash pond only. The ash pond will be at a distance of about 5 km from the main plant. The water requirement is 4550 m3/hr. Seawater will be used, which will be taken from the water channel of the North Chennai Thermal Power Project. The fresh water requirement will be met through desalination of seawater. Coal requirement is estimated as 2.52 million TPA, which will be obtained from MCL and transported by sea route up to Ennore and thereafter by conveyor. Public hearing for this project was held on 5.3.2008. No National Park and Wildlife Sanctuary is located within 10 Km from project area. Total cost of the project is Rs. 2640.68 crores which includes Rs. 177.48 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) Boundary of the proposed power project shall be outside the CRZ boundary. No activity shall be taken up except permissible activity with due clearance in the CRZ area.
- (ii) Prior CRZ clearance for the activities/ facilities to be located in the CRZ area shall be obtained before start of the work on the project.
- (iii) Sulphur and ash contents in the coal to be used in the project shall not exceed 0.34% & 34 % respectively at any given time. In case of variation of coal quality at the time of issue of LOA, a fresh reference shall be made to MOEF for suitable amendments to environmental clearance conditions wherever necessary.
- (iv) A single stack of 275 m height shall be provided with continuous online monitoring equipments for SO<sub>x</sub>, NO<sub>x</sub> and Particulate & Hg emissions. Exit velocity of flue gases shall not be less than 22.2 m/sec.
- (v) High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm<sup>3</sup>.
- (vi) Space for FGD installation should be provided whenever the need arises for its installation, i.e. if emissions level exceeds the AAQ standards.
- (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 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 9<sup>th</sup> year full fly ash utilization should be ensured. Unutilized ash shall be disposed off in the ash pond. Mercury and other heavy metals (As,Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond.
- (ix) Ash pond shall be lined with impervious lining. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.
- (x) Closed cycle cooling system with Natural Draft Cooling Tower shall be provided and the effluents shall be treated as per the prescribed norms.
- (xi) The treated effluents conforming to the prescribed standards only shall be discharged. The temperature of the discharged effluents shall not exceed 5<sup>0</sup> C over and above the ambient water temperature of Creek

water/ receiving water body. The temperature of the discharged water shall be monitored continuously and records maintained.

- (xii) A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.
- (xiii) Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater 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 the 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 Bangalore.
- (xv) Storage facilities for auxiliary 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. Sulphur content in the liquid fuel will not exceed 0.5%
- (xvi) Regular monitoring of ground water in and around the ash pond area including heavy metals (Hg,Cr,As,Pb) 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 at least 25% area preferably with local species.
- (xviii) Budgetary allocation for taking up activities under CSR should be at least Rs. 3.0 crores under capital expenditure and Rs. 50.0 lakh/annum under recurring expenditure.
- (xix) First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (xx) Noise levels emanating from turbines shall be so controlled such that the noise in the work zone 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 SO<sub>2</sub>, NO<sub>x</sub>, Hg,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. The data shall also be put on the website of the company.

- (xxii) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (xxiii) 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>.
- (xxiv) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/Municipal Corporation, urban local Body and the Local NGO, is any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
- (xxv) A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
- (xxvi) The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- (xxvii)** The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data ( both in hard copies as well by e- mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.
- (xxviii) Regional Office of the Ministry of Environment & Forests located at Bangalore 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. Project proponent will up-load the compliance status in their website and update the same from time to time at least six monthly basis. Criteria pollutants levels ( Stack & ambient levels of NO<sub>x</sub>) will be displayed at the main gate of the power plant.

- (xxix) 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. 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.
- (xxx) Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bangalore /the CPCB/the SPCB who would be monitoring the compliance of environmental status.
- (xxxi)
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 operations by the power plant.
6. In case of any deviation or alteration in the project proposed including coal transportation system 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.

  
(LALIT KAPUR)  
DIRECTOR

## Copy to:-

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
2. The Secretary, Department Environment & Forests Department, Secretariat Chennai- 600 009.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, No. 100, Mount Salai, Guindy, Chennai-600 032 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 cum-Office Complex, East Arjun Nagar, Delhi- 110032.
6. The Chief Conservator of Forests, Ministry of Environment & Forests, Regional Office (SZ), Kendriya Sadan, 4<sup>th</sup> Floor, E&F Wings, 17<sup>th</sup> Main Road, II-Block, Koramangla, Bangalore-560034.
7. The Director(EI), MOEF.
8. Guard file.
9. Monitoring file.

(LALIT KAPUR)  
DIRECTOR