

BY SPEED POST

F. No. J-13011/51/2008-IA.II(T)  
Government of India  
Ministry of Environment & Forests

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

Dated : 18<sup>th</sup> Feb, 2009

To

M/s KVK Nilachal Power Pvt. Ltd.  
6-3-1109/A/1, 3<sup>rd</sup> Floor, Navabharath Chambers,  
Raj Bhavan Road, Somajiguda,  
Hyderabad - 500 082.

Sub: 3x350 MW of 4x350 MW Coal based Thermal Power Project in Kandareil, Athagarh Tehsil, District Cuttack, Orissa by M/s KVK Nilachal Power Pvt. Ltd - Environmental clearance regarding.

Sir,

The undersigned is directed to refer to your communication no. Nil dated 10.9.2008 regarding the subject mentioned above.

2. It is noted that the proposal is for grant of environmental clearance for setting up of a 3x350 MW of 4x350 MW coal based thermal power project in Kandareil, Tehsil Athagarh, District Cuttack, Orissa. The project will be implemented in two phases. Phase I will be of 1x350 MW while phase II will be 3x350 MW. The total land requirement is 938 acres. The coordinates of the project site are latitude 20° 34' 42" N to 20° 35' 58" N and longitude 85° 44' 11" E to 85° 45' 40" E. Water requirement is 4600 m<sup>3</sup>/hr, which will be obtained from river Mahanadi. Induced draft cooling towers with COC of 5 will be adopted. Zero discharge will be adopted except during monsoon. Two bi-flue stacks of 275 m height will be installed. The coal to be used will have maximum sulphur content of 0.5% and ash content of 45%. Greenbelt will be raised in an area of 30% of the project area. It is estimated that 254 families will be affected due to the project. No ecologically sensitive area is reported in 10 Km area of the project; however there are 5 reserve forests within 5 km radius. The public consultation for the ultimate capacity of 4x350 MW was held on 20.3.2008. Total cost of the project ( 4x350 MW) is Rs. 6300.00 crores which includes Rs. 430.60 crores for environmental protection measures for both the phases

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 3x350 MW power project only under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions:-

- (i) No additional land in excess of 938 acres shall be acquired for any activity/facility of this project. Distance between project boundary and railway line shall be kept at 500 m.
- (ii) Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5% and 45% 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.
- (iii) Two bi-flue stack of 275 m height each shall be provided with continuous online monitoring equipments for Sox, NOx, Particulate and Hg. Exit velocity of flue gases shall not be less than 22 m/sec.
- (iv) High efficiency Electrostatic Precipitator (ESP) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm<sup>3</sup>.
- (v) Space provision shall be kept for retrofitting of FGD, if required at a later date.
- (vi) 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.
- (vii) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. 100% fly ash utilization shall be ensured from day one. Unutilized bottom ash shall be disposed off in ash pond. Mercury and other heavy metals (As, Pb, Cr, Hg etc) shall be monitored in bottom ash and in the effluents emanating from the ash pond.
- (viii) Ash pond shall be lined with impervious lining. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.

- (ix) Closed cycle cooling system with Induced draft cooling towers shall be provided. COC of at least 5 shall be adopted and the effluents shall be treated as per the prescribed norms.
- (x) 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.
- (xi) A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.
- (xii) 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.
- (xiii) 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 Bhubaneswar.
- (xiv) 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%.
- (xv) 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 structure to be removed after the completion of the project.
- (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 1/3 of total area preferably with local species.

- (xviii) Adequate funds shall be allocated for undertaking CSR activities.
- (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) 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, / office of Municipal Corporation/Gram Panchayat concerned and on the company's web site 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>.
- (xxiii) A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
- (xxiv) 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.

- (xxv) 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 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 up-date the same from time to time at least six monthly basis. Criteria pollutants levels ( Stack & ambient levels of NOx) will be displayed at the main gate of the power plant.
- (xxvi) 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.
- (xxvii) 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.
- (xxviii) Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bhubaneswar /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.

( LALIT KAPOOR)

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, A/3, Chandrasekharpur, Bhubaneswar-751023.
7. Director (EI), MOEF.
8. Guard file.
9. Monitoring file.

  
( LALIT KAPOOR)  
DIRECTOR