



J-13011/23/1996 - IA. II (T)
Government of India
Ministry of Environment & Forests

Paryavaran Bhavan, C.G.O. Complex,
Lodi Road, New Delhi -110003.
Dated: 01.09.2011

To,

M/s Udupi Power Corpn. Ltd.
2nd Floor, 'Le-Parc Richmond'
No. 51, Richmond Road
Bangalore- 560 025.

**Sub: 2x600 MW Imported Coal Based TPP at Udupi Distt, in
Karnataka - reg. Amendment of Environmental Clearance.**

Sir,

This has reference to your letters dated 13.10.2010, 21.03.2011, 14.04.2011 and 06.06.2011 requesting for amendment in the environmental clearance accorded by this Ministry vide its letter of even no. dated 20.03.1997 and others.

2. Environmental clearance was accorded for 2x500 MW for the power project by the Ministry on 20.03.1997. Thereafter an amendments were issued after due diligence on 25.01.1999 and 09.09.2009 respectively permitting enhancement of capacity to 2x507.5 MW and subsequently to 2x600 MW. It has been noted that CRZ clearance for permissible activities has been obtained on 18.05.2010.

3. The request for amendment of condition nos. (vi), (ix) under para no.2 of the Ministry's letter of even no., dated 20.03.1997 and observations made in the amendment issued vide the Ministry's letter of even no., dated 09.09.2009 has been examined. It has been noted that the environmental clearance and its amendments issued need to be merged into a comprehensive environmental clearance for clarity. The proposal regarding amendment was also deliberated in 12th, 15th, 17th, 20th, 22nd and 26th Meetings of the Expert Appraisal Committee (Thermal Power) held during December, 2010, January 2011, February, 2011, March, 2011, April, 2011 and June, 2011 respectively.

4. Based on the information submitted by you in the Ministry and the presentations made before the Expert Appraisal Committee (Thermal Power) in its meetings mentioned at para no. 3 above, the Ministry of Environment and Forests hereby informs that the environmental clearance for the 2x600 MW Imported Coal Based Thermal Power Plant near Padubidri, in Udupi Distt., in Karnataka is accorded vide this Ministry's letter of even no., dated 20.03.1997 and its amendments dated 25.01.1999 and 09.09.2009 shall be

now substituted by this final comprehensive clearance subject to the compliance of the following Specific and General conditions:

A. Specific Conditions:

- (i) All the conditions stipulated by the Karnataka State Pollution Control Board issued from time to time should be strictly implemented including the installation of Flue Gas Desulphurisation (FGD) Plant. The status of implementation of FGD shall be submitted to the Regional Office of the Ministry at Bangalore.
- (ii) Sulphur and ash contents in the coal to be used in the project shall not exceed 0.8 % and 12 % (average) respectively at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to the Ministry.
- (iii) A single bi-flue stack of 275 m height shall be provided with continuous online monitoring equipments for SO_x, NO_x and Particulate Matter (PM_{2.5} & PM₁₀). Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.
- (iv) An instrumented meteorological tower shall be set up for collecting on-site meteorological data.
- (v) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission from the proposed plant does not exceed 50 mg/Nm³. Low NO_x Burners shall be installed.
- (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) Transportation of coal from Mangalore Port to the project site shall be undertaken by rail with adequate provisions to prevent fugitive emissions.
- (viii) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry. 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. No ash shall be disposed off in low lying area. To prevent ground water contamination, the ash pond area should be lined with impervious layer.
- (ix) The transportation of dry fly ash to the ash disposal area through closed bulkers shall be allowed till 30.03.2012 till the Cement

Grinding unit of M/s ACC Ltd. is set up. Monitoring of particulate emissions along the route of transportation shall be carried out.

- (x) Extensive monitoring of air quality in and around the power plant and extending up to Western Ghat should be carried out and records should be scientifically maintained. The monitoring Programme should cover the key stone species for any potential acid deposition effects.
- (xi) No leachate shall takes place at any point of time from the Coal storage area and Ash Pond and adequate safety measures such a lining with impermeable membrane / liner shall be adopted. Precautionary measure shall be taken to protect the ash dyke from getting breached and in-built monitoring mechanism shall be formulated.
- (xii) Fugitive emission of fly ash (dry or wet) shall be controlled so that no agricultural or non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided in consultation with the local Panchayat.
- (xiii) COC of atleast 1.25 shall be adopted.
- (xiv) Closed Circuit Cooling Tower shall be installed and sea water shall be used for cooling purpose. The sweet water requirement shall be met from the desalination plant.
- (xv) No effluent will be discharged into the Mulki River. The treated effluents shall be discharged through a pipeline in the Arabian Sea ensuring that the differential temperature is maintained at 5^o C. The area and location of the intake and discharge point shall be finalised in consultation with the National institute of Oceanography (NIO), Goa/Central Water and Power Research Station, Pune.
- (xvi) Brine management from desalination plant, its disposal mechanism and status of implementation shall be submitted to the Regional Office of the Ministry from time to time.
- (xvii) Possibility for setting up transit storage within plant site for temperature control of effluent before discharge to the sea shall be examined and details submitted to the Ministry **within six months**.
- (xviii) Monitoring of ground and surface water quality nearby shall be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and or advised by the State Pollution Control Board and records maintained. Monitoring for heavy metals in ground water shall be undertaken.

- (xix) A well designed rain water harvesting system shall be put in place which shall comprise of rain water collection from the built up and open area in the plant premises. Action plan and road map for implementation shall be submitted to the Regional Office of Ministry.
- (xx) The project proponent shall not hamper the vocation of the fishing community in the area (if any) and it shall be ensured that local fishing community shall be allowed to carry out their vocation. Clearance from the Department of Fisheries in the State Govt. shall be obtained.
- (xxi) Acquisition of land should be restricted to 550 ha as per the following breakup:

Plant area	180 ha
Ash disposal area	150 ha
Colony area	45 ha
Intake pipe route	25 ha
Other requirement	50 ha
Rehabilitation, green belts, Ash utilisations etc.	100 ha

- (xxii) Green belt of adequate width and density with suitably selected native species should be developed all around the plant area and the ash disposal site. Density of tress shall not be less than 2000 per ha and survival rate not less than 80%. It shall be ensures that at least 1/3rd of the total area is utilised for creation of green belt. Adequate financial provision should be made for this purpose.
- (xxiii) Local employable youth from Project Affected Family shall be trained in skills relevant to the project for eventual employment in the project itself. The action taken report and details thereof to this effect shall be submitted to the Regional Office of the Ministry and the State Govt. Dept. concerned from time to time.
- (xxiv) The project affected people should be rehabilitated and resettled in consultation with the State Govt. of Karnataka. A Rehabilitation Committee should be constituted with representatives from the state Govt of Karnataka, affected people, local recognised NGOs, technical institutions, experts etc.
- (xxv) Status of implementation of R&R including its financial component spent and action pending shall be submitted to the regional Office of the Ministry from time to time.
- (xxvi) Financial requirements for implementation of the environmental mitigative measures should be earmarked and shall not be diverted for

the other purposes. Adequate provision should be ensured for enhancement of funds required, if any, in future.

- (xxvii) The project proponent shall also adequately contribute in the development of the neighbouring villages. Special package with implementation schedule for free potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.
- (xxviii) The project proponent shall formulate sustainable livelihood scheme for landless and marginalised section of society (such as landless farmers) in the area who are directly or indirectly affected due to power project.
- (xxix) At least three nearest village shall be examined for possible adoption and basic amenities like development of roads, drinking water supply, primary health centre, primary school etc shall be developed in co-ordination with the district administration.
- (xxx) An amount of Rs 5.0 Crores shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs 1.0 Crores per annum till the life of the plant shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted **within one month** along with road map for implementation.
- (xxxi) CSR scheme shall be identified based on need based assessment in and around the villages within 5.0 km of the site and in constant consultation with the village Panchayat and the District Administration. As part of CSR prior identification of local employable youth and eventual employment in the project as required after imparting relevant training shall be also undertaken as necessary.
- (xxxii) It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.
- (xxxiii) A Monitoring Committee should be constituted for reviewing the compliance to various safeguard measures by involving recognised local NGOs, Pollution Control Board, Institutions, Experts etc.

B. General Conditions:

- (i) A Corporate Environmental Policy shall be formulated and after due approval of the Board of Directors of the Company shall be submitted to the Ministry **within six months**. The policy shall specifically address issues of adherence to environmental policy so formulated

and environmental clearance conditions stipulated for the power project and also others including matters related to violations of stipulated conditions (if any) to the Board.

- (ii) The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not do not get mixed.
- (iii) A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.
- (iv) A well designed rainwater harvesting shall be constructed. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within **a period of three months** from the date of issue of clearance and details shall be furnished to the Regional Office of the Ministry.
- (v) 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.
- (vi) Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.
- (vii) Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg,Cr,As,Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.
- (viii) Monitoring surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.
- (ix) First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.

- (x) 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/noise less areas.
- (xi) Regular monitoring of ground level concentration of SO₂, NO_x, PM_{2.5} & PM₁₀ and Hg 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.
- (xii) Provision shall be made for the housing of construction labour (as applicable) 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.
- (xiii) 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.
- (xiv) 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, if 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 project proponent.
- (xv) An Environmental Cell shall be created at the project site itself and shall be headed by an officer of appropriate seniority and qualification. It shall be ensured that the head of the Cell shall directly report to the Head of the Organization. The status report on the functioning of the Cell shall be submitted to the regional office of the Ministry periodically. The Cell shall comprise of an expert in Marine Biology, Fishery and Mangroves preservation.
- (xvi) The proponent shall upload the status of compliance of the stipulated environmental clearance 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 (PM_{2.5} & PM₁₀), SO₂, NO_x (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.

- (xvii) The environment statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.
- (xviii) **The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.**
- (xix) Regional Office of the Ministry of Environment & Forests 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 including NO_x (from stack & ambient air) shall be displayed at the main gate of the power plant.**
- (xx) 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.
- (xxi) 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.
- (xxii) Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status.

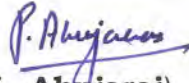
5. The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. The Ministry may also impose additional environmental conditions or modify the existing ones, if necessary.

6. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

7. In case of any deviation or alteration in the project 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.

8. 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, 2008 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.

Yours faithfully,


(Dr. P.L. Ahujarai)
Scientist'F'

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Secretary (Environment), Forests and Environment Department Government of Karnataka
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Karnataka State Pollution Control Board, Parisara Bhawan, 4th & 5th Floor, 49, Church Street, Bangalore - 560 001.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi- 110032.
6. The Chief Conservator of Forests, Regional Office (SZ), Kendriya Sadan, 4th Floor E&F Wings 17th Main Road, 1 Block, Koranmangala, Bangalore-560 034.
7. The District Collector, Udupi District, Govt. of Karnataka.
8. The Director (EI), MOEF.
9. Guard file.
10. Monitoring file.

(Dr. P.L. Ahujarai)
Scientist'F'