



J-13012/112/2010-IA.II (T)
Government of India
Ministry of Environment, Forest and Climate Change

Indira Paryavaran Bhawan, Jor Bagh Road,
Aliganj, New Delhi-110003,

Dated: 20.01.2016

To

M/s NTPC Ltd.
NTPC Bhawan, Scope Complex, 7,
Institutional Area, Lodhi Road,
New Delhi- 110003.

Sub: Expansion of Ramagundam STPP by addition of 2x800 MW (Stage-IV, Telangana STPP, Phase-I) at Village & Mandal Ramagundam, District Karimnagar, Telangana by M/s. NTPC Ltd. - reg. Environmental Clearance.

Sir,

This has reference to your online application dated 13.10.2015 and additional information/documents submitted vide letter dated 16.11.2015 w.r.t the aforesaid project. This Ministry has examined the proposal. It is inter-alia, noted that the ToR for preparation of EIA/EMP report was accorded by the Ministry on 16.09.2014 and an amendment of ToR for revision of capacity to 2x800 MW was accorded on 12.12.2014. Public Hearing for the project was conducted on 23.05.2015.

2. The land requirement for the proposed TPP would be about 635 acres and will be accommodated within the existing Ramagundam Thermal Power Station. No R&R issues are involved. There are no ecologically sensitive areas such as Biosphere Reserve, National Park and Wildlife Sanctuary within a radius of 10 km from the site. River Godavari flows at a distance of about 4 km from the project site. The nearest railway station, Ramagundam is about 5 km from the plant which lies on the main Kazipet - Ballarshah broad gauge railway line of South Central Railway. The cost of the expansion project is about Rs. 9,954.20 Crores, which includes about Rs. 834.81 crores for environmental protection measures.

3. The coal requirement will be 8 MTPA based on GCV of coal between 3,200-3,900 Kcal/kg. Ministry of Coal (MoC) vide letter dated 10.09.2015 has allotted Mandakini-B Coal Mine block in Odisha to the proposed TPP. Further, MoC vide its letter dated 21.09.2015 has accorded in-principle approval for grant of tapering linkage from Coal India Limited (CIL) for the proposed TPP as an exceptional case till the operation of Mandakini-B coal block. Accordingly, Coal India Limited (CIL) vide its letter dated 06.11.2015 has allotted tapering coal linkage for the proposed TPP from Western Coalfields Ltd. (WCL). The sulphur and ash content in the coal will be 0.5 % (max) and 34-43 % respectively. The transportation of coal will be by rail.

4. The water requirement of the proposed TPP is 5,825 cum/hr (about 58 Cusecs), which is proposed to be drawn from Sreepada Yellampally barrage on River Godavari at a distance of about 14 km from proposed site. Government of Telangana vide its letter dated 02.09.2015 has accorded and certified permission for drawl of 60 cusecs (2.00 TMC) water throughout the year from Sreepada Yellampally Barrage from the net available yield. COC of 5.0 shall be adopted. The plant would be designed on zero discharge concept in normal circumstances.

5. The ash generation will be 3.44 MTPA. Ash utilization/management shall be done as per MOEF&CC Gazette Notification on utilization of ash dated 03.11.2009. Ash utilization plan will be implemented for 100% extraction and utilization of dry fly ash along with suitable collection, storage, segregation, loading, transportation and disposal etc. facilities. Dry form fly ash shall be pneumatically transported to fly ash silos. Loading this ash in tankers/ bulkers and also into rail wagons. Fly ash shall be taken by High Concentration Slurry Disposal system (HCSD) and bottom ash through Wet Slurry Disposal system for ultimate disposal to ash disposal area. Expressions of interests for using ash from the proposed TPP were received from Orient Cement, Kesoram Cement and Vasavadatta Cement plants.

6. Based on the information, clarification, documents submitted and presentations made by you and your consultant, viz. Vimta Labs Ltd., Hyderabad before the *Expert Appraisal Committee (Thermal Power)* in its 45th & 46th Meetings held during 29th-30th October, 2015 & 26th-27th November, 2015, respectively, the Ministry hereby accords environmental clearance to the above project under the provisions of EIA Notification dated September 14, 2006 and subsequent amendments therein subject to compliance of the following Specific and General conditions:

A. Specific Conditions:

- (i) *As the Satellite Imagery submitted was not clear, a clear satellite imagery shall be submitted to the Ministry and its R.O. Further, latest authenticated satellite imagery shall be submitted on an annual basis to the Ministry and its R.O. to monitor the alterations of the area.*
- (ii) *The PP shall ensure compliance to the Ministry's Notification dated 02.01.2014 regarding use of coal with ash content not exceeding thirty-four per cent, on quarterly average basis. This is to be ensured by incorporating a condition in the MoU/FSA with CIL etc. Also, if required, coal washery shall be installed.*
- (iii) *The Sulphur and ash content of coal shall not exceed 0.5% and 34 % respectively. In case of variation of quality at any point of time, fresh reference shall be made to the Ministry and suitable amendments to the environmental clearance will have to be sought.*
- (iv) *FGD shall be installed as the emissions are found to be almost reaching threshold limit of 80 unit (for the worst case scenario) and also considering the cushion w.r.t NAAQS.*
- (v) *NTPC shall endeavor to enter into MoUs with NHAI, Associations of Cement Industries and Municipal Authorities for ensuring ash utilization in roads construction and cement manufacturing.*
- (vi) *The PP shall examine possibility of relocating the ash pond. In case, the relocation of ash pond is not possible, precautionary measures by providing maximum green belt between ash pond and reservoir etc. shall be undertaken.*
- (vii) *Study shall be conducted regarding the impact on agricultural fields in terms of heavy metal in food chain and ground water/soil for a period of one year and the report submitted to the Ministry.*
- (viii) *The Ash Water Re-circulation System (AWRS) shall be immediately installed for the existing TPP. Till that time, the ash pond effluent shall not be discharged into agricultural fields etc.*

- (ix) *The PP shall enhance the green belt of the existing TPP in compliance to the earlier EC conditions etc.*
- (x) *Long term monitoring of temperature shall be undertaken on-site and off-site of the TPP, as data of decrease in temperature needs to be verified. Further, requisite corrective action shall be taken based on the findings of the monitoring.*
- (xi) *As the data for the health studies was more than five years old, a fresh Occupational Health and epidemic health disorders survey of the study area (10 km radius) shall be conducted and the report submitted to the Ministry and its R.O. within one year.*
- (xii) *As committed, a minimum amount of Rs. 20 Crores shall be earmarked as capital cost for CSR activities and the recurring cost per annum shall be as per the CSR policy of GOI till the operation of the plant commences.*
- (xiii) *Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within **six months**.*
- (xiv) *Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.*
- (xv) *A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof analyzed every two year and reported along with monitoring reports. Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.*
- (xvi) *Online continuous emission monitoring system for stack emission and ambient air shall be installed.*
- (xvii) *High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm³ or as would be notified by the Ministry, whichever is lesser. 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 along with an environment friendly sludge disposal system.*
- (xviii) *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.*
- (xix) *COC of atleast 5.0 shall be adopted.*
- (xx) *Monitoring of 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 also be undertaken and results/findings submitted along with half yearly monitoring report.*

- (xxi) A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed record kept of the quantity of water harvested every year and its use.
- (xxii) No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.
- (xxiii) Wastewater generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB/CPCB.
- (xxiv) Online continuous effluent monitoring system shall also be installed.
- (xxv) Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.
- (xxvi) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) shall be monitored in the bottom ash. No ash shall be disposed off in low lying area.
- (xxvii) Fugitive emission of fly ash (dry or wet) shall be controlled such 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.
- (xxviii) Green Belt consisting of three tiers of plantations of native species all around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per ha with survival rate not less than 80 %.
- (xxix) CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.
- (xxx) For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.
- (xxxi) An Environmental Cell comprising of at least one expert in environmental science/ engineering, ecology, occupational health and social science, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.

B) General Conditions:

- (i) 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 get mixed.
- (ii) A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.
- (iii) 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.
- (iv) Storage facilities for auxiliary liquid fuel such as LDO/ 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.
- (v) First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (vi) Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) from source. 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.
- (vii) Regular monitoring of ambient air 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.
- (viii) Utilization of 100% Fly Ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.
- (ix) 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.
- (x) 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>.

- (xi) 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, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
- (xii) 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.
- (xiii) 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.
- (xiv) **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 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.**
- (xv) 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.**
- (xvi) 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.
- (xvii) 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.

(xviii) Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry / CPCB/ SPCB who would be monitoring the compliance of environmental status.

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

8. The environmental clearance accorded **shall be valid for a period of 7 years** from the date of issue of this letter to start operations by the power plant.

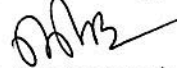
9. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

10. 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.

11. 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, Handling & Transboundary Movement) Rules, 2008 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.


12. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Yours faithfully,


(B. B. Barman)
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 Telangana.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Telangana State Pollution Control Board, Paryavaran Bhawan, A-3 Industrial Estate, Sanath Nagar, Hyderabad- 500 018.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
6. The Additional PCCF (Central), Regional Office, Ministry of Environment, Forests and Climate Change, 1st & 2nd Floors, HEPC Building, 34, Cathedral Garden Road, Nungambakkam, Chennai- 600034.
7. The District Collector, Karimnagar District, Govt. of Telangana.
8. Guard file/Monitoring file.
9. Website of MoEF&CC


(B. B. Barman)
Scientist 'F'