



J-13011/26/89-IA.II (T)
Government of India
Ministry of Environment & Forests

Tel no: 011- 24364067
Paryavaran Bhavan, C.G.O. Complex,
Lodi Road, New Delhi -110003.

Dated: 19.02.2014

To

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

**Sub: 3x660 MW North Karanpura Thermal Power Project near Tandwa in
Chatra Distt., Jharkhand of National Thermal Power Corporation Ltd.
- reg. revalidation of Environmental Clearance**

Sir,

This has reference to your letters dated 30.04.2013, 06.12.2013 and 03.01.2014 requesting for revalidation of Environmental Clearance (EC) accorded for the above mentioned project vide this Ministry's letter of even no. dated 29.11.2004 under the EIA Notification, 1994.

2. It is noted that the project area and the water requirement have been revised from 2,570 acres to 890 acres and from 10,100 m³/h to 5,835 m³/h respectively. The matter was also placed before the Expert Appraisal Committee (Thermal Power) in its 74th Meeting held during May 20-21, 2013.

3. Since you have commenced the construction of the project within the validity period of five years from the date of issue of EC, the said EC continues to be valid as per the EIA Notification, 1994.

4. Further, under Para no.3 of this Ministry's letter of even no. dated 29.11.2004, after the condition no. (xxvi), the following conditions shall be added:

- xxvii). Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within **six months**.
- xxviii). Harnessing solar power within the premises of the plant particularly at available roof tops shall be undertaken and status of implementation shall be submitted periodically to the Regional Office of the Ministry.
- xxix). Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5 % and 48 % at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to environmental clearance condition wherever necessary.
- xxx). A long term study on radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. 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.

- xxxi). Mercury emissions from stack shall also be monitored on periodic basis.
- xxxii). High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission from the proposed plant does not exceed 50 mg/Nm³.
- xxxiii). Provision for installation of FGD shall be provided for future use.
- xxxiv). 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.
- xxxv). COC of atleast 5.0 shall be adopted. The water requirement shall not exceed 5,835 m³/h.
- xxxvi). 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.
- xxxvii). Hydrogeology of the area shall be reviewed annually from an institute/ organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case any deterioration is observed specific mitigation measures shall be undertaken and reports/ data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry.
- xxxviii). 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 be undertaken.
- xxxix). Wastewater generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB/CPCB.
- xl). 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.
- xli). Utilization of 100% Fly Ash generated shall be made from 4th year of operation. Status of implementation of the Fly Ash Utilization Notification and its amendments shall be reported to the Regional Office of the Ministry from time to time.
- xlii). Fly ash shall not be used for agricultural purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by

the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.

- xl.iii). 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 form. 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.
- xl.iv). Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.
- xl.v). 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.
- xl.vi). Green Belt consisting of three tiers of plantations of native species 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 %.
- xl.vii). A common **Green Endowment Fund** shall be created and the interest earned out of it shall be used for the development and management of green cover of the area.
- xl.viii). 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.
- xl.ix). A minimum amount of 0.4% of the project cost shall be earmarked as one time capital cost for activities to be taken up under CSR during construction phase of the Project. Subsequently, a recurring expenditure of 1/5th of the capital cost of the CSR budget shall be earmarked for CSR activities per annum till the life of the plant. Social Audit by a reputed University or an Institute shall be carried out periodically as per CSR guidelines of Govt. of India and details to be submitted to MOEF besides putting it on Company's website.
- i). 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.
- ii). An Environmental Cell comprising of at least one expert in environmental science/engineering, occupational health and social scientist, shall be created preferably at the project site itself and shall be headed by an officer

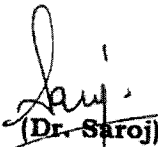
of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the head of the organization who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.

- lii). 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.
- liii). A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.
- liv). 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.
- lv). 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. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.
- lvi). First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- lvii). 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.
- ✓ lviii). 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.
- lix). 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.
- lx). 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.

- lxi). 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.
- lxii). 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.
5. All other conditions mentioned in this Ministry's letter of even no. dated 29.11.2004 shall remain valid.
6. This issues with the approval of the Competent Authority.

Yours faithfully,


(Dr. Saroj)
Director

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 Jharkhand.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Jharkhand Pollution Control Board, TA Building, HEC Complex, P.O. Dhurwa, Distt. Ranchi.
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, Chandersekharapur, Bhubaneswar-751023.
7. The District Collector, Chatra District, Govt. of Jharkhand.
8. Guard file.
9. Monitoring file.

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(Dr. Saroj)
Director