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भारत सरकार
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FORESTS AND CLIMATE CHANGE
इंदिरा पर्यावरण भवन, जोर बाग रोड,
अलीगंज, नई दिल्ली-110 003
INDIRA PARYAVARAN BHAWAN, JOR BAGH ROAD,
ALIGANJ, NEW DELHI-110 003
Website : moef.nic.in
2nd Level, JAL Block

F. No. J-13012/54/2010-IA.II (T)

Date: 31st March, 2015

To

M/s NTPC Ltd.
NTPC Bhawan
SCOPE Complex
7, Institutional Area
Lodhi Road
New Delhi- 110 003

Subject: **Environmental Clearance to 2x660 MW Khargone Super Critical Thermal Power Project at Village Selda and Dalchi, Khargone District, Madhya Pradesh by M/s. NTPC Ltd.**

Sir,

This has reference to your letters dated 12.02.2015, 24.02.2015 and 26.02.2015 on the subject mentioned above. The Ministry has examined the application for environment clearance for this project. It is noted that the ToR for preparation of EIA/EMP report was accorded by the Ministry on 9th December, 2010 and due to expiry of the validity period for these ToR, fresh ToR was accorded on 25th July, 2014. Public Hearing for the project was conducted by the MPPCB on 24th January, 2012.

2. The land requirement for the project is about 1370 acres of which about 1081.58 acres is already in possession of NTPC. The remaining land shall be acquired and R&R shall be involved in the project. The Latitude and Longitude of the Main Plant, Ash dyke and Township are: 22°03'11" N-22°04'13" N, 22°03'11" N-22° 04'13" N, 22°04'18" N -22° 04'44" N and 75°50'49" E-75°52'26" E, 75°49'52" E-75°50'58" E, 75° 51'25" E-75°52'00" E respectively. There are no National Parks, Wildlife Sanctuaries, Biosphere/Elephant/Tiger Reserves, Heritage sites within 10 km of the project site. There are no major settlements within 5 km from the proposed site and no major industries within 10 km. Nearest railway station is Sanawad on Indore-Khandwa meter gauge about 30 km and Indore- Khandwa SH-27 is about 30 km from the site. Land rate and R&R benefits package was approved by Cabinet, GoMP on 12.09.2012 in consultation with stakeholders. There is no tribal population among the affected families. The project cost is about Rs. 9,181 Crores and the cost towards environmental protection is about Rs. 1,421.2 Crores.



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3. The coal requirement will be about 6.51 MTPA and will be met from Pakribarwadih captive coal block. Environment and Forest Clearances for the coal block were accorded by the Ministry on 19.05.2009 and 17.09.2010 respectively. The Sulphur content and ash content in the coal will be 0.4% - 0.5% and 40 - 43% respectively. The coal transportation shall be by Rail. The water requirement of 3800 cum/hr will be sourced from Omkareshwar dam on Narmada River. Govt. of Madhya Pradesh vide letter dated 02.02.10 has accorded commitment for 55 Cusecs of water from Narmada River for the project. CWC had also accorded concurrence for the withdrawal vide letter dated 27.07.2012. The plant would be designed on zero discharge concept in normal circumstances. Water requirement for the Project shall be optimized with designed COC of 5 for conservation of water. The fly ash utilization/management shall be done as per MOEF Gazette Notification on utilization of fly ash dated 03.11.2009. It is estimated that about 8000 tonne/d i.e. about 2.60 MTPA of fly ash would be produced in the power generation process.

4. Based on the information submitted by you to the Ministry and presentations made by you and your consultant namely M/s Vimta Labs, Hyderabad before the Expert Appraisal Committee (Thermal Power) in its 32nd Meeting held during February 23rd- 24th, 2015, the Ministry hereby accords environmental clearance to the above project under the provisions of Environment Impact Assessment Notification dated September 14, 2006 and amendments therein subject to the compliance of the following Specific and General conditions:

A. Specific Conditions:

- (i) Coal transportation shall be by Rail only. An additional EIA shall be carried out and an EMP shall be prepared for laying down the rail line and alternate mode of transportation, in case rail line gets delayed. The EIA/EMP shall be submitted to the Ministry within one year of issuing the EC.
- (ii) The Sulphur and ash content of coal shall not exceed 0.5 % and 43 % respectively. In case of variation of quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments in the environmental clearance.
- (iii) Latest authenticated satellite imagery shall be submitted to the Regional Office of the Ministry on an annual basis to monitor the environmental alterations of the area.



- (iv) Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within **six months**.
- (v) 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.
- (vi) One twin flue stack of 275 m height shall be provided with continuous on-line monitoring system for SO_x, NO_x and PM_{2.5} & PM₁₀. Exit velocity of flue gases shall not be less than 22 m/sec. In addition to the regular parameters, Mercury emission from stack shall also be monitored on **six monthly** basis.
- (vii) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm³. Adequate dust extraction system such as cyclones/bag filters and water spray system to control fugitive emissions in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.
- (viii) COC of atleast 5.0 shall be adopted.
- (ix) Monitoring of surface water quantity and quality shall be conducted regularly and records shall be maintained. The monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records shall be maintained. The monitored data shall be submitted to the Ministry **every six months**.
- (x) Monitoring for heavy metals in ground water in the vicinity of plant shall also be undertaken and monitoring report shall be submitted to the Ministry **every six months**.
- (xi) 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 records shall be kept for the quantity of water harvested **every year** and its use.
- (xii) 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.
- (xiii) Hydrogeology of the area shall be reviewed annually through an institute/ organization of repute to assess impact of surface water and ground water (especially around ash dyke). In case, any deterioration is



observed specific mitigation measures shall be undertaken immediately. Reports/ data of water quality shall be submitted to the Regional Office of the Ministry **every six months**.

- (xiv) Wastewater generated from the plant shall be treated before discharge to comply with the standards prescribed by the SPCB/CPCB.
- (xv) Additional soil for leveling of the proposed site, if require shall be taken from within the sites (to the extent possible) so that natural drainage system of the area is protected.
- (xvi) 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 effluents emanating from the ash pond and in the bottom ash also. No ash shall be disposed off in low lying area.
- (xvii) 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 shall be provided in consultation with the local Panchayat.
- (xviii) Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media so that no leaching takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.
- (xix) 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 shall be analyzed every two years and shall be reported to the Ministry along with the 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.
- (xx) Green Belt of least 50 m width consisting of three tiers of plantations of native species around the plant shall be raised. Wherever 50 m width is not feasible, an adequate justification shall be submitted to the Ministry and appropriate width not less than 20 m shall be planted. Tree density shall not be less than 2500 per ha with survival rate not less than 80 %.
- (xxi) Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.
- (xxii) 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.

- (xxiii) For 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 (**every six months**) and final.
- (xxiv) 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 seniority 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) Space for FGD shall be provided for future installation, if required.
- (ii) The treated effluents conforming to the prescribed standards under Environment (Protection) Act, 1986 only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water 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) 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 etc., as an when finalized, shall be submitted to the Ministry as well as to the Regional Office of the Ministry.
- (v) Separate 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%. Provisions of the Manufacture, Storage and Import of Hazardous Chemical Rules and The Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996 shall



be applicable as per the quantity stored. Disaster Management System shall be established as per the Disaster Management Plan to meet any eventuality in case of an accident taking place due to storage of oil.

- (vi) First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (vii) Noise levels from turbines in 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.
- (viii) 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 of the project and record shall be maintained. In case these levels exceed the prescribed limits, necessary control measures shall be taken immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Monitoring reports shall be submitted to the Regional Office of this Ministry **every six months**. The data shall also be uploaded on the website of the company.
- (ix) Fly Ash generated shall be utilized 100% from the 4th year of operation of the power plant. Status of fly ash utilization shall be reported **each year** to the Regional Office of the Ministry.
- (x) 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.
- (xi) 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 receipt 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>.

- (xii) 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.
- (xiii) 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 **every six months**. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.
- (xiv) 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.
- (xv) The environment statement for each financial year ending 31st March in Form-V as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall be submitted by the project proponent to the concerned State Pollution Control Board. The same shall also be uploaded 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.
- (xvi) **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 every six months and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.**
- (xvii) 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.

- (xviii) The details of the funds along with item-wise break-up of Rs.1421.2 crores allocated for implementation of environmental protection measures shall be submitted to the Ministry. This 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 shall be reported to the Ministry.
- (xix) 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.
- (xx) 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.
5. 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.
6. The environmental clearance accorded **shall be valid for a period of 5 years** from the date of issue of this letter to start operation of the power plant.
7. 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.
8. 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.
9. 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.



10. 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,



(Sanchita Jindal)
Scientist 'F' & Director (T)

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. The Secretary, Department of Environment, Government of Madhya Pradesh, Bhopal.
5. The Chairman, Madhya Pradesh Pollution Control Board, E-5, Arera Colony, Paryavaran Parisar, Bhopal-462016, Madhya Pradesh.
6. The Chief Conservator of Forests, Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Ravishankar Nagar, Bhopal - 462016.
7. The Collector, District Khargone, M.P.
8. Guard file/Monitoring file.

(Sanchita Jindal)
Scientist 'F' & Director (T)