



J-13012/144/2007-IA.II (T)
Government of India
Ministry of Environment, Forest and Climate Change

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

Dated: 21.06.2016

To

The Chief Engineer (Civil-New Projects),
M/s Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd.,
(U.P Govt. undertaking)
7th Floor, Shakti Bhawan Extn.,
14 Ashok Marg, Lucknow-226001.
E.mail: ce.civil.newprojects@uprvunl.org

Sub: Expansion of Obra TPP by addition of 2x660 MW at Obra, Tehsil Robertsganj, District Sonbhadra, Uttar Pradesh by M/s Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (UPRVUNL) - reg. Environmental Clearance.

Sir,

This has reference to your online application dated 11.09.2015 and essential/additional documents submitted vide letters dated 23.11.2015, 14.01.2016 and 28.02.2016 w.r.t the aforesaid project. The Ministry has examined the proposal.

2. It is inter-alia, noted that the ToR for preparation of EIA/EMP report for 2x500 MW was accorded by the Ministry on 05.10.2007. Public Hearing was conducted on 18.12.2008. Based on the EAC recommendation in its 36th Meeting held during 14th-15th November, 2011, the request of UPRVUNL for change in unit configuration from 2X500 MW to 2X660 MW was agreed to by the Ministry vide letter dated 30.01.2012. The revised EIA/EMP report in consonance with the changed scenario by taking into consideration the cumulative impacts, compliance to the conditions by the existing TPP and revised Form-I were also sought.

3. The revised EIA report was appraised by the EAC during its 60th meeting held on November 5-6, 2012. Accordingly, MoEF vide letter dated 18.04.2013 directed UPRVUNL to collect the fresh AAQ, Water & Soil data and revise the EIA/EMP report, re-conduct Public Hearing based on revised EIA/EMP report and also submit additional information/documents sought by the EAC. Subsequently, the EIA Report had been revised and UPPCB had re-conducted Public Hearing on 17.10.2014.

4. The proposed expansion TPP will be located within the existing TPP land and no additional land would be required. Kaimur Wildlife Sanctuary is located at a distance of 7.7 km from the project site. The application for obtaining clearance from NBWL was submitted on 15.12.2012 and the same is under consideration by MoEF&CC. Further, MoEF&CC vide their Draft Notification dated 22.09.2015 have proposed the extent of eco-sensitive zone as 1 km all around the boundary of Kaimur Wildlife Sanctuary. The cost of the project is Rs. 8,777.71 crores.

5. Jamarpani Coal Mine of Brahmani Basin, Rajmahal group of Coalfields, Jharkhand was allotted by Ministry of Coal for the proposed expansion. The boiler will be designed for 100% domestic coal (worst case scenario). However, till 100% domestic coal is available, 70% imported and 30% domestic coal will be used. The 30% domestic coal will be sourced from the linkage coal of the old units which will be phased out before the commissioning of the proposed expansion TPP. A revised MOU has been entered into with MMTTC on dated 24.02.2016 for the desired coal

characteristics and quantity. As per revised MOU, the sulphur, ash and GCV are 0.6%, 12% (max.) and 5,000-5,500 Kcal/Kg respectively. The imported coal requirement will be 3.4 MTPA, which will be blended with domestic coal 1.6 MTPA (70:30). Consent for transportation of imported coal from Port to project location has been accorded by Railways vide their letter dated 16.10.2015.

6. The water requirement is 85.63 MLD and will be sourced from Obra Dam on Rihand River (upstream), which is at a distance of 1.5 km from the TPP. Water allocation is available vide letter dated 13.07.2009. High Concentration Slurry Disposal (HCSD) shall be installed for the ash disposal. M/s. Jaypee Cement Ltd., Dala, District Sonbhadra, U.P. has expressed interest to lift the fly ash generated from the TPP.

7. Based on the information, clarification, documents submitted and presentations made by you and your consultant, viz. BHEL, PCRI, Haridwar before the *Expert Appraisal Committee (Thermal Power)* in its 50th & 54th Meetings held during 28th -29th January, 2016 and 31st March, 2016 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) *The EC is subject to the clearance from the Standing Committee of the NBWL. Further, the grant of EC does not necessarily imply that wildlife clearance shall be granted to the project. The proposal of wildlife clearance will be considered by the respective authorities on its merits and decision taken. The investment made in the project, if any based on EC, in anticipation of the clearance from wildlife angle shall be entirely at the cost and risk of the project proponent and MoEF shall not be responsible in this regard in any manner.*
- (ii) *The action plan submitted for phasing out the existing old Units shall be duly implemented in a time bound manner. Further, the standards notified by the Ministry on 07.12.2015 for thermal power plants shall also be complied by the existing Units.*
- (iii) *The EC is recommended for 70% imported and 30% domestic coal. The PP shall apply for suitable amendment of EC after obtaining the EC and FC of the linked coal block or if there is any change in the proposed source of coal.*
- (iv) *The Sulphur and ash content of imported coal shall not exceed 0.6% and 12 % respectively. The Sulphur and ash content of domestic coal shall not exceed 0.4% and 32% respectively. In case of variation of quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to the environmental clearance.*
- (v) *Detailed credible Action Plan for fly ash Utilization from the existing and expansion units in compliance to the Ministry's Notifications shall be submitted to the Ministry. The details (size, location and liner system, including capping if any for old ash pond) of existing ponds along with quantity of ash and that for proposed units should be provided.*
- (vi) *As a precautionary measure to prevent the entry of heavy metals into food chain, the PP should: (i) immediately barricade the polluting ash dykes and the contaminated area including agricultural fields of farmers, (ii) the PP should examine the possibility of acquiring the agriculture fields after paying*

compensation to the farmers, and (iii) the fields should not be used for cultivation till they are decontaminated.

- (vii) As the data provided by PP indicates contamination of soil by heavy metals crossing limits in respect of Ni, there is a need to carry out detailed assessment for soil contamination to know the extent (area & depth) of contamination and then preparation of remediation plan through a competent organization / agency in this field. Based on such study, the PP should undertake both short and long-term mitigation measures including bioremediation technologies to decontaminate the polluted sites and prevent further pollution from existing ash dykes.
- (viii) The PP should immediately undertake the study not only relating to the contaminated sites, but also the details on the number of ash dykes and the area covered by ash dykes, the amount of ash lying in the dykes, the volume of effluent discharged, and current status of these dykes should be made available for evolving effective decontamination strategies.
- (ix) As PP has indicated about achieving zero discharge of effluent, the details of proposed system are required to be provided by PP of the 12 MLD ETP proposed, including proposed R.O. system, management of R.O. reject as well as ash overflow and its recycling arrangement.
- (x) The PP should also undertake short and long-term studies on health disorders among people living within the contaminated area.
- (xi) The PP should create an Environment Cell exclusively for Obra TPP, which shall also look into the management of fly ash dumps and monitor decontamination programme of the contaminated sites. The Cell should include one ecologist, one soil scientist/microbiologist, one environmental scientist/engineer, one plant scientist and one occupational health expert. The Head of the Cell (officer of appropriate superiority and qualification) shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.
- (xii) As committed, a minimum amount of Rs. 35 crores shall be earmarked for the capital cost of CSR during the construction phase of the project. The CSR budget during the operational phase shall be minimum as per the CSR policy of GOI. Based on the socio-economic study being carried out by IIT Kanpur, a detailed budgeted credible action plan shall be submitted to the Ministry.
- (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 monitoring system for stack emission, ambient air and effluent shall be installed.



- (xvii) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 30 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) The SO₂, NO_x and Hg emissions shall not exceed 100 mg/Nm³, 100 mg/Nm³ and 0.03 mg/Nm³ respectively.
- (xix) The specific water consumption shall not exceed 2.5 m³/MWh and zero waste water discharge shall be achieved.
- (xx) 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.
- (xxi) COC of atleast 5.0 shall be adopted.
- (xxii) 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.
- (xxiii) 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.
- (xxiv) 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.
- (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) 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.
- (xxviii) 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.

- (xxix) 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 %.
- (xxx) Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.
- (xxxii) The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.
- (xxxiii) 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.
- (xxxiiii) 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.

B) General Conditions:

- (i) Space for FGD shall be provided for future installation as may be required.
- (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 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 shall be submitted to the Ministry as well as to the Regional Office of the Ministry.
- (v) 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.
- (vi) First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (vii) 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.

- (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 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.
- (ix) 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.
- (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 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 the Website of MoEF&CC 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 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.
- (xiv) 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.
- (xv) **The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to MoEF&CC, 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, MoEF&CC.

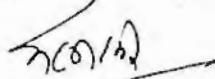
- (xvi) The progress of the project shall be submitted to CEA on six monthly basis.
- (xvii) Regional Office of the MoEF&CC will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along 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.**
- (xviii) 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.
- (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.
- C) An as built or as completed report on EMP to be submitted stating the scope/extent of work envisaged in the EIA along with estimated cost vis-à-vis the actual completed works and cost incurred. A certificate/completion certificate accordingly, shall have to be submitted before commissioning of the TPP.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.

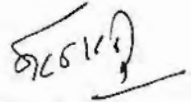
13. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Yours faithfully,


(Dr. S. Kerketta)
Scientist 'F'

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 Secretary, Department of Environment, Govt. of Uttar Pradesh.
4. The Chairman, U.P. Pollution Control Board, PICUP Bhawan, 3rd Floor, B-Block, Vibhuti Khand, Gomti Nagar, Lucknow-226010.
5. The Additional Principal Chief Conservator of Forests (C), Ministry of Environment Forest and Climate Change, Regional Office (Central Region), Kendriya Bhawan, 5th Floor, Sector - H, Aliganj, Lucknow-226020
6. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
7. The District Collector, Sonbhadra District, Govt. of U.P.
8. Guard file/Monitoring file.
9. Website of MoEF&CC


(Dr. S. Kerketta)
Scientist 'F'