

E-mail: sanchita@nic.in
sansom_2859@yahoo.co.in
Telefax: 011-24695402



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

No.J-13012/2/2010-IA.II (T)

Date: 12th May, 2015

To

M/s UP Rajya Vidyut Utpadan Nigam Ltd.
Environment & Safety Unit
7th Floor, Shakti Bhawan Extn.
14- Ashok Marg
Lucknow- 226 001
Uttar Pradesh
Telefax: 0522-2288557

Subject: Environmental Clearance to Expansion Project by addition of 1x660 MW Coal Based Super Critical Unit to existing 665 MW capacity at Harduaganj Thermal Power Project at Kasimpur, Aligarh District, Uttar Pradesh by M/s Uttar Pradesh Rajya Vidyut Nigam Ltd.

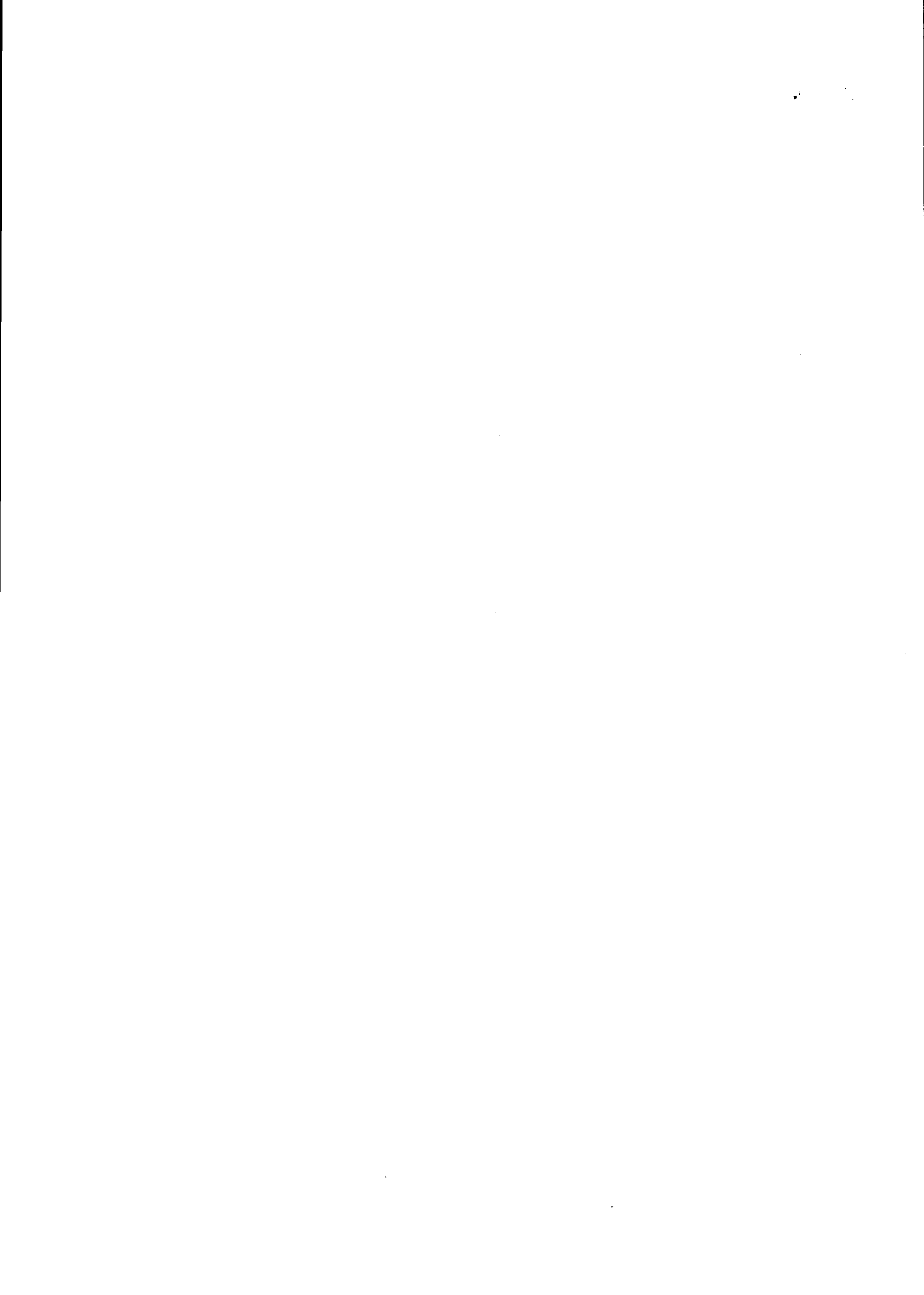
Sir,

This has reference to your letters dated 20.08.2011, 25.03.2013, 04.03.2014, 09.05.2014, 20.12.2014 and 24.02.2015 on the subject mentioned above. The Ministry has examined the application. It is noted that the ToR for preparation of EIA/EMP report was accorded by the Ministry on 12.03.2010. The EIA/EMP report after conducting Public Hearing on 27.05.2011 was submitted to the Ministry in August, 2011 for consideration of environmental clearance. The baseline data was again collected from 15th March – 15th June, 2013 for revalidation. The revised final EIA/EMP Report with revalidated data was submitted to the Ministry in March, 2014. However, the project was on hold due to the linkage of coal.

2. The total capacity of the existing Units under operation is 605 (105 +2X250) MW. Although another 60 MW Unit is currently operational, will be phased out shortly. The total area of Harduaganj TPS is 201.31 Ha. The land required and usable land available for proposed TPP is 60 Ha. The coordinates of the proposed plant site are Latitude 28° 0' 29.87" N and Longitude 78° 8' 9.77" E. The main power house would be constructed at old colony area. Existing ash dyke of the power station will be used for the proposed Unit (after raising its bund height). As the land is within existing UPRVUNL premises, there are no land acquisition and R&R issues. There are no litigations pending or otherwise with respect to project in any Court, Tribunal etc. The estimated project cost is Rs. 4674.49 Crores.

3. The estimated raw coal requirement for the proposed Unit is 2.96 MTPA (with GCV of 4,200 kCal/kg and Design Station Heat Rate of 2,380 kCal/kWh at 90% PLF). UPRVUNL had been allocated Chhendipada Coal Block in Talcher coalfield, Orissa.





However, the same has been cancelled by Hon'ble Supreme Court of India. Ministry of Coal, GOI, has allocated 250 million tonnes of coal from Deocha-Pachami Coal Block (WB) and 51 million tonnes from Kalyanpur-Badalpara Coal Block (Jharkhand) to UPRVUNL for its projects including the proposed Unit. Based on the MoM dated on 24.07.2014 (Agenda Point No. 3) of SLC of Ministry of Coal, LOA/Linkage granted to the old plant (to be phased out) shall be automatically transferred to new super critical units. UPRVUNL Board and Energy Task Force of U.P have approved to utilize coal from old units of UPRVUNL till the coal block is made available for the proposed 1x660 MW Unit. The ash content, sulfur content and GCV of the allocated Chhendipada Coal Block are 32%, 0.47% and 4200 kCal/kg respectively. The ash content, sulfur content and GCV of the coal blocks for the existing units are 33-34%, 0.4-0.5% and 4200-4800 kCal/kg respectively.

4. Water requirement for the proposed expansion will be 2,440 m³/hr (24 cusec) with ash water re-circulation system and shall be met from Upper Ganga Canal. Total 106 cusec of water is already allotted to Harduaganj TPS which is sufficient to meet the requirements of water for the various units like Units 5 (60 MW) and 7 (105 MW) (Unit 5 to be phased out), newly constructed Units 8 and 9 (2x250 MW) and Proposed 1 x 660 MW Plant. 100% fly ash from the existing Units is being utilized since last 10 months and the same shall be targeted for the proposed expansion. An expression of interest has been received from two cement manufacturers for utilizing the fly ash i.e. M/s Mangalam Cement Ltd. and Shree Cement Limited. Fly ash will also be utilized through brick manufacturing units.

5. Based on the information submitted and presentations made by you and your consultant viz. M/s EQMS India Pvt. Ltd., Delhi 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 EIA Notification dated September 14, 2006 and amendments therein subject to the compliance of the following Specific and General conditions:

A. Specific Conditions:

- i) Immediate measures shall be taken to control the PM in consultation with SPCB.
- ii) Coal transportation shall be by Rail only
- iii) Water consumption shall be optimized as per CEA norms.
- iv) The existing ash pond shall be utilized and no additional land will be required for ash pond.
- v) Ground water quality around the ash pond area shall be monitored by installing four piezometric wells around the old (completely filled and abandoned) ash pond area and six piezometric wells around the new (presently being utilized) ash pond area to check leachate from the ash ponds.

- vi) 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 for suitable amendments to the environmental clearance.
- vii) As committed, a minimum amount of 0.4% of the capital cost of the project shall be earmarked as capital cost for CSR activities and 1/5th of the capital cost shall be earmarked as recurring cost per annum till the operation of the plant.
- viii) Latest authenticated satellite imagery shall be submitted on an annual basis to monitor the alterations of the area.
- ix) Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within **six months**.
- x) 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.
- xi) 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.
- xii) A stack of 275 m height shall be provided with continuous online monitoring equipments for SO_x, NO_x and 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.
- xiii) 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 in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.
- xiv) 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.
- xv) COC of atleast 5.0 shall be adopted.
- xvi) Monitoring of surface water quantity and quality shall also be regularly conducted and records shall be 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.
- xvii) Isotopic studies shall be conducted considering the direction of ground water and remediation plan shall be prepared by a reputed institute and implemented accordingly.
 - xviii) Ground water quality around the ash pond area shall be monitored every six months by making four piezometric wells around the old ash pond area and six piezometric wells around the new ash pond area to check leachates from the ash ponds.
 - xix) 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.
 - xx) 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.
 - xxi) 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.
 - xxii) Wastewater generated from the plant shall be treated before recycling/re-use to comply with the limits prescribed by the SPCB/CPCB.
 - xxiii) Additional soil for leveling of the proposed site shall be taken from within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.
 - xxiv) 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. Fly ash shall be transported by road through closed trucks only.
 - xxv) 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.
 - xxvi) 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.

- xxvii) 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 %.
- xxviii) Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.
- 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) 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 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. The levels of criteria pollutant namely SPM, RSPM (PM_{2.5} & PM₁₀), SO₂, NO_x in both ambient air 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 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.**
- (xvi) 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.
- (xvii) 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.
- (xviii) 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.

(xix) 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.

6. 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.

7. The environmental clearance accorded **shall be valid for a period of 5 years** from the date of issue of this letter to start operations by the power plant.

8. 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.

9. 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.

10. 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.

11. 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.

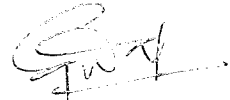
Yours faithfully,

(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 U.P.
5. The Chairman, U.P. Pollution Control Board, PICUP Bhawan, 3rd Floor, B-Block, Vibhuti Khand, Gomti Nagar, Lucknow-226010.

6. The Chief Conservator of Forests (C), Ministry of Environment and Forests, Regional Office (Central Region), Kendriya Bhawan, 5th Floor, Sector - H, Aliganj, Lucknow.
7. The Collector, District Aligarh, U.P.
8. Guard file/Monitoring file.



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