

SPEED POST

J 13012/148/2008-IA.II (T)

Government of India

Ministry of Environment & Forests



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Paryavaran Bhawan

CGO Complex, Lodi Road

New Delhi-110 003

Dated: January 21, 2013.

To

M/s Hindalco Industries Ltd.

Century Bhavan,

Dr. Annie Besant Road,

Mumbai- 400 025.

Tel-05446-278592-95.

Sub: Modernization and Expansion of existing power plant from 741.7MW to 999.7 MW Imported coal based of M/s Hindalco Industries Ltd. at Renusagar, District Sonbhadra in Uttar Pradesh - reg. Environmental Clearance.

Sir,

The undersigned is directed to refer to your letters dated 09.02.2012, 28.02.2012, 21.05.2012 and 26.06.2012 on the subject mentioned above. The Ministry of Environment & Forests has examined the application.

2. It is informed that the proposal is for partly modernization and expansion of existing power plant from 741.7 MW to 999.7 MW by addition of 258 MW in phases. Additional generation of 98.3 MW will be achieved through process modification and addition of 1x79.7 MW and 1x80 MW new TG sets will be involved. The existing plant of capacity 741.7 MW is located at village Renusagar, District Sonbhadra Distt., in Uttar Pradesh. No additional land is required (1.9 Ha land required is within the existing plant premises). The co-ordinates of the site are located within Latitude 24°10'41" N to 24°11'06" N and Longitude 82°47'05" E to 82°47'25" E. Nearest village is Renusagar which is located at 0.6 Kms from the site. Ash pond is located at about 7.0 Kms distance from the site. GB Pant Sagar is located at a distance of 0.9 Km from the plant. MoU for imported coal has been signed with M/s Swiss Singapore Overseas Enterprises Pte Ltd. Ash and sulphur contents in imported coal will be 10% and 0.4% respectively. Gross Calorific Value will be 4200 kcal/kg. The coal will be transported through rakes to Krishnashilla Railway siding to project site through a combination of link conveyor belt pipe conveyor and aerial ropeways. Possibility for installation of wagon tippler at railway siding will be explored. Fly ash will be supplied to M/s Jaiprakash Associates Ltd., M/s Prism Cement Ltd., M/s ACC Ltd., M/s Kymore Cement Works, M/s Birla Corporation Ltd., M/s ECO Cement

India Ltd., M/s Hyderabad Industries Ltd., M/s Jai Laxmi Cement Co. Pvt. Ltd., M/s Trinayani Cement Pvt. Ltd., and M/s Kalyanpur Cement Ltd. No additional water will be drawn. Water requirement of 236.97 m³/hr will be met from recycling of treated waste water. IDC and Air Cooled Condenser cooling system shall be installed. There are no National Parks, Wildlife Sanctuaries, Heritage Sites, Tiger/Biosphere reserves etc. within ten km of the project site. Public Hearing was held on 23.09.2009. Cost of the project will be Rs.773.33 Crores.

3. The project has been considered in accordance with the provisions of the EIA notification issued by the Ministry of Environment & Forests vide S.O. 1533 (E), dated September 14, 2006.

4. Based on the information submitted by you, as at Para 2 above and others and presentation made before the Expert Appraisal Committee (Thermal Power) in its 50th Meeting held during June 25-26, 2012, by you and your consultant viz. M/s Vimta Labs Ltd., Hyderabad, the Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA notification dated September 14, 2006, subject to the compliance of the following Specific and General conditions:

A. Specific Conditions:

- (i) The project proponent shall submit compliance status of the action plan formulated by the State Pollution Control Board and required to be undertaken by them for their captive power and other plants in the area within **one month**.
- (ii) In case source of fuel supply is to be changed at a later stage (now proposed imported coal from Indonesia/South Africa) the project proponent shall intimate the Ministry well in advance along with necessary requisite documents for its concurrence for allowing the change. In such a case the necessity for re-conducting public hearing may be decided by the Ministry in consultation with the Expert Appraisal Committee. It shall be ensured that the imported coal is an additional coal coming to the country for the specific requirement of the power project.
- (iii) Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within **six months**.
- (iv) 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.

- (v) Transportation of coal shall be railway siding to project site through a combination of link conveyor belt pipe conveyor and aerial ropeways. The proponent shall explore the possibility for installation of wagon tippler at railway siding.
- (vi) Sulphur and ash contents in the coal to be used in the project shall not exceed 0.4 % and 10 % respectively 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.
- (vii) Stack of 100 m height shall be provided with continuous online monitoring equipments for SO_x, NO_x and Particulate Matter (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.
- (viii) Space provision for installation of FGD shall be made.
- (ix) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission from the proposed plant does not exceed 50 mg/Nm³.
- (x) 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.
- (xi) Utilisation of 100% Fly Ash generated shall be made from 4th year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.
- (xii) 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.
- (xiii) 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.

- (xiv) 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.
- (xv) 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.
- (xvi) A long term study of 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.
- (xvii) Continuous monitoring for heavy metals in and around the existing ash pond area shall be carried out by reputed institutes like IIT, Roorkee.
- (xviii) 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.
- (xix) COC of atleast 5.0 shall be adopted.
- (xx) A well designed rain water harvesting system shall be put in place which shall comprise of rain water collection from the built up and open area in the plant premises. Action plan and road map for implementation shall be submitted to the Regional Office of Ministry.
- (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) Waste water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB/CPCB.
- (xxiii) 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 less than 2500 per ha with survival rate not less than 80 %.
- (xxiv) 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.

- (xxv) An amount of **Rs 3.10** Crores shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of **Rs 0.60** Crores per annum till the life of the plant shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for implementation.
- (xxvi) CSR scheme should address Public Hearing issues and shall be undertaken based on need based assessment in and around the villages within 5.0 km of the site and in constant consultation with the village Panchayat and the District Administration. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken.
- (xxvii) It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.
- (xxviii) An Environmental Cell shall be created 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 Organization.

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) 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.
- (ix) 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>.
- (x) 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, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
- (xi) 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.

- (xii) 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.
- (xiii) **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 environment 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.**
- (xiv) 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.**
- (xv) 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.
- (xvi) 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.

(xvii) 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 of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. 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** to start operations by 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,

(Dr. Saroj)
Scientist 'F'

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Secretary (Environment), Environment Department, Government of Uttar Pradesh, Lucknow.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.

4. The Chairman, Uttar Pradesh Pollution Control Board, PICUP Bhawan, 3rd Floor, B-Block, Vibhuti Khnad, Gomti Nagar, Lucknow – 226 020.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi- 110032.
6. The Chief Conservator of Forests, Regional Office (WZ), E-5, Kendriya Bhandar, 5th Floor, Sector-H, Aliganj, Lucknow – 226 020.
7. The District Collector, Sonebhadra District, Uttar Pradesh.
8. Guard file.
9. Monitoring File.

(Dr. Saroj)
Scientist 'F'