

BY SPEED POST

No.J-13011/16/2007-IA.II(T)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan
CGO Complex, Lodi Road
New Delhi-110 003

Dated: 14th August, 2007

To

M/s Bharat Aluminium Co. Ltd
Aluminium Sadan, Core-6
Scope Complex
7- Lodi Road, New Delhi- 110 003

**Sub: 1200 MW coal based TPP at Korba, Chhattisgarh by M/s BALCO Ltd
– Environmental Clearance regarding.**

Sir,

The undersigned is directed to refer to your communication no. Kb/Power/1200 MW/2006/15 dated 27.03.2007 regarding the subject mentioned above. Subsequent information furnished vide letter no. Kb/Power/1200 MW/2007/19 dated 14.06.2007 have also been considered.

2. The proposal is for grant of environmental clearance under EIA Notification, 1994 for setting up of a 1200 MW coal based thermal power plant in village Risda at Korba, Chhattisgarh. The land requirement is estimated as 355 acres. The coal requirement is estimated as 19600 TPD, which will be obtained from South Eastern Coalfields Ltd. through MGR system. Water requirement is estimated as 3100 m³/hr, which will be obtained from Hasdeo river. COC of 5 shall be adopted. Ash will be disposed in abandoned red mud ponds using high concentration slurry disposal system. No forestland is involved. No ecologically sensitive area such as National Park and Wildlife Sanctuary is within 10 Km radius from the plant boundary. Public hearing was held on 7th March, 2007. Total cost of the project is Rs 4810.00 crores which includes Rs 125.00 crores for environmental protection measures.

3. The proposal has been considered in accordance with para 12 of the EIA Notification dated 14th September, 2006 read with sub clause (i) (a) of clause 2.2.1 of sub para 2.2 of para 2.0 of the Circular No. J-11013/41/2006 – IA.II (I) dated 13th

October, 2006. Based on the recommendations of the Expert Appraisal Committee for Thermal Power and Coal Mine Projects, the Ministry of Environment & Forests hereby accords environmental clearance to the said project under the provisions of EIA Notification 2006, subject to implementation of the following terms and conditions:-

- (i) The total land requirement shall not exceed 355 acres for all the activities/facilities of the power project.
- (ii) Ash and sulphur contents in the coal to be used as fuel shall not exceed 42% and 0.5% respectively.
- (iii) A bi-flue stack of 275 m height shall be provided with continuous online monitoring equipments.
- (iv) High efficiency Electrostatic Precipitator (ESP) with efficiency not less than 99.9 % shall be installed so as to ensure that particulate emissions do not exceed 50 mg/Nm³.
- (v) Space provision shall be made for Flue Gas De-sulphurisation (FGD) unit of requisite efficiency of removal of SO₂, if required at a later stage.
- (vi) Low NO_x burners shall be installed.
- (vii) Closed Circuit Cooling system with cycle of concentration (COC) of 5 shall be provided.
- (viii) For controlling fugitive dust, regular sprinkling of water in the coal handling area and other vulnerable areas of the plant shall be ensured.
- (ix) The project authorities should adhere to the provisions stipulated in the fly ash notification of September, 1999 and as amended in August, 2003 in regard to fly ash utilization.
- (x) The unutilized fly ash and bottom ash shall be disposed in the form of High Concentration Slurry in the abandoned red mud ponds. The ash pond shall be lined with impervious lining to avoid any leaching into groundwater. The ash dyke shall be so designed and strengthened to ensure guard against breaching. Adequate safety measures shall also be taken so that pond ash does not become air borne to cause air pollution in the surrounding areas.
- (x) Rain water harvesting should be adopted. Central Groundwater Authority / Board shall be consulted for finalization of appropriate rain water harvesting structure within a period of three months from the date of clearance.
- (xi) The study on reuse of 1920 m³/day of discharge water shall be completed early latest within three months and submitted to MoEF. Based on the same, any

additional safeguard measures required shall be implemented in the project. Zero discharge shall be adopted.

- (xii) Regular monitoring of ground water quality including heavy metals shall be undertaken around ash dyke and the project area to ascertain the change, if any, in the water quality due to leaching of contaminants from ash disposal area.
- (xiii) A greenbelt shall be developed all along the plant and ash pond boundary covering a total area of 1/3 of total project area.
- (xiv) First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (xv) Leq of Noise level should be limited to 75 dBA and regular maintenance of equipment be undertaken. For people working in the high noise areas, personal protection devices should be provided.
- (xvi) Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Quarterly reports shall be submitted to the Regional Office of this Ministry.
- (xvii) The project proponent should advertise within seven days of issue of environmental clearance, in at least two local newspapers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board/Committee and may also be seen in the Website of the Ministry of Environment and Forests in the <http://envfor.nic.in>.
- (xviii) A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.
- (xix) Half yearly report on the status of implementation of the conditions and environmental safeguards should be submitted to this Ministry, the Regional Office, CPCB and SPCB.
- (xx) Regional Office of the Ministry of Environment & Forests located at Bhopal will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report, Environment Management Plan and the additional information / clarifications submitted subsequently should be forwarded to the Regional Office for their use during monitoring.

- (xxi) Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. These cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.
- (xxii) Full cooperation should be extended to the Scientists/Officers from the Ministry and its Regional Office at Bhopal / the CPCB / the SPCB during monitoring of the project.
- 4. The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry.
- 5. The environmental clearance accorded shall be valid for a period of 5 years to the start of production operations by the power plant.
- 6. In case of any deviation or alteration in the project proposed 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 incorporate additional environmental protection measures required, if any.
- 7. 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 and Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.


(Dr. S.K. AGGARWAL)
 Director

Copy to:-

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi - 110 001.
2. The Secretary, Department of Environment, Govt. of Chhattisgarh, Dau Kalyan Singh Bhawan, Raipur-492001.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110 066.

4. The Chairman, Chhattisgarh Environment Conservation Board, Nanak Niwas, Civil Lines, Raipur-492001 - with a request to display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office for 30 days.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110 032.
6. The Chief Conservator of Forests, Central Regional Office, Ministry of Environment & Forests, E-3/240, Arera Colony, Bhopal-462 016.
7. Director (EI), MOEF.
8. Guard file.
9. Monitoring file.

(Dr. S.K. AGGARWAL)
Director



J-13011/16/2007 - IA. II (T)
Government of India
Ministry of Environment & Forests

Tel no: 011- 24367257
e-mail: w.bharat@nic.in
Paryavaran Bhavan, C.G.O. Complex,
Lodi Road, New Delhi -110003.
Dated: 27.04.2011

OFFICE ORDER

Sub: Change in configuration from 2x600 MW to 4x300 MW Coal Based Thermal Power Plant at village Risda, in Korba Distt., in Chhattisgarh - reg.

Sir,

This has reference to your letter no. TPP-1200/Env/A-01/10/353, dated 12.11.2010 requesting for amendment in the environmental clearance accorded by this Ministry vide its letter of even no. dated 14.08.2007.

2. The request has been examined and the following changes as mentioned under shall be made in this Ministry's letter of even no. dated 14.08.2007.

- a) After the figure 1200 MW mentioned in the subject matter and at para no.2, second line, the configuration 4x300 MW shall be inserted.
- b) Under para no.3, clause no. (iii) read as 'A bi-flue stack of 275 m height shall be provided with continuous online monitoring equipments' shall now be substituted by the following:

'Two bi-flue stacks of 275 m height each 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 may also monitored on periodic basis'.

- c) After clause no. (xxii), under para no.3, the following shall be added:

(xxiii) The project proponent shall upload the status of compliance of the conditions stipulated in the environmental clearance issued vide this Ministry's letter of even no. dated 14.08.2007, in its website and updated periodically and also simultaneously send the same by e-mail to the Regional Office of the Ministry of Environment and Forests.

Cont'd.....

- xxiv) Criteria pollutants levels including NO_x, RSPM (PM₁₀ & PM_{2.5}), SO_x (from stack & ambient air) shall be regularly monitored and results displayed in your website and also at the main gate of the power plant.

7. All other conditions mentioned in this Ministry's aforesaid letter of even no. 14.08.2007 shall remain the same.

This issues with the approval of the Competent Authority.


Yours faithfully,


(W. Bharat Singh)
Deputy Director

M/s Bharat Aluminium Company Ltd.
Aluminium Sadan, Core-6
SCOPE Office Complex
Lodhi Road
New Delhi - 110 003.

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Secretary (Environment), Environment Department, Government of Chhattisgarh, Raipur.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, State Environment Conservation Board, Nanak Niwas, Civil Lines, Raipur, Chhattisgarh - 421 001
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 Paryavaran Bhawan, Arera Colony, Ravishankar Nagar, Bhopal - 462016.
7. The District Collector, Korba District, Chhattisgarh.
8. Guard file.
9. Monitoring File.


(W. Bharat Singh)
Deputy Director

J-13011/16/2007-IA. II (T)
Government of India
Ministry of Environment, Forests and Climate Change

3rd Floor, Vayu Block,
Indira Paryavaran Bhawan, Jor Bagh Road,
Aliganj, New Delhi-110003

Date:- 18.09.2014

To

M/s Bharat Aluminium Company Ltd.
Aluminium Sadan, Core-6
SCOPE Office Complex
Lodhi Road
New Delhi - 110 003.

Sub: 1200 MW (4x300) Coal Based Thermal Power Plant by M/s. BALCO Ltd. at Village Risda, in Korba Distt., in Chhattisgarh -reg. Extension of validity of environmental clearance.

Sir,

This has reference to your letters dated 14.07.2012 and 10.08.2012 on the above subject. It is noted that EC was accorded by MoEF for 1200 (2x600) MW on 14.08.2007 and subsequent amendment dated 27.04.2011 for change in project configuration from 2x600 to 4x300 MW.

2. The matter was placed before the EAC (Thermal Power) in its 54th Meeting held during August 6-7, 2012. In acceptance of the recommendation of the EAC and in view of the information/clarification furnished by you with respect to the above mentioned power project and the information / clarifications provided by the MoEF, Regional Office and CECB, the validity of said EC and its subsequent amendment is extended for a period of five years i.e. till 13.08.2017 to start the production operations by the power plant.

3. Further, under Para no.3 of the said EC dated 14.08.2007 and its amendment dated 27.04.2011 after the condition no. (xxiv), the following conditions shall be added:

- (xxv) *The action plan formulated for Korba Region by CECB / CPCB shall be complied.*
- (xxvi) 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.
- (xxvii) 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.
- (xxviii) Mercury emissions from stack shall also be monitored on periodic basis.

- (xxix) No ground water shall be extracted for use in operation of the power plant even in lean season. 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.
- (xxx) Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ Rivers (as applicable) even in lean season.
- (xxxi) 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.
- (xxxii) Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.
- (xxxiii) 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.
- (xxxiv) 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.
- (xxxv) 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.
- (xxxvi) 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.
- (xxxvii) 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.


(xxxviii) 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.

(xxxix) 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.

4. All other conditions mentioned in this Ministry's letter of even no. dated 14.08.2007 and its amendment dated 27.04.2011 shall remain the same.

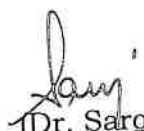
5. This issues with the approval of the Competent Authority.

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 Chhattisgarh, Raipur.
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