



NI- 12 /Korba/05

Date:- 21/02/2005

CHHATTISGARH ENVIRONMENT CONSERVATION BOARD
Nanak Niwas, Civil Lines, Raipur (C.G.)

No. /TS/CECB/2005

Raipur, Dated: ___/___/2005

To,

M/s Aryan Coal Benefication Private Limited
Villages - Kasaipalli,
Tehsil - Katghora,
District - Korba (C.G.)

Sub: Permission to establish 1 x 30 = 30 megawatt reject coal based thermal power plant.

Ref: Your application No. ACBPL/BSP/Power/04-05/01 dated: 24-01-2005 and subsequent correspondence ending dated: 21-02-2005.

Without prejudice to the powers of this Board under the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981 and without reducing your responsibilities under the said Acts and after going through your proposal for achieving the effluent and gaseous emission standards, it is to inform you that this Board grants you permission only for establishment of 1 x 30 = 30 megawatt reject coal based thermal power plant at Khasra Nos. 193/2, 195/2च, 195/3ख, 256/3, 256/1ष, 256/1ढ, 256/1य, 256/1र, 256/1भ, 256/1म, 256/1द, 256/1प, 256/1फ, 257, 190/1, 190/3, 192/1, 191/1, 192/2 etc., Patwari Halka No. 31, Revenue Inspector Circle - Katghora, Village - Kasaipalli, Tehsil - Katghora, District - Korba (C.G.) subject to fulfillment of the following terms and conditions.

Terms & Conditions: -

1. Industry shall acquire at least 25 acres additional land (adjoining to already acquired land of Khasra Nos. 193/2, 195/2च, 195/3ख, 256/3, 256/1ष, 256/1ढ, 256/1य, 256/1र, 256/1भ, 256/1म, 256/1द, 256/1प, 256/1फ, 257, 190/1, 190/3, 192/1, 191/1, 192/2, Patwari Halka No. 31, Revenue Inspector Circle - Katghora, Village - Kasaipalli, Tehsil - Katghora, District - Korba) for establishment of proposed 1 x 30 = 30 megawatt reject coal based thermal power plant before start of any construction activities related with 1 x 30 =

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30 megawatt reject coal based thermal power plant at proposed site.

2. Adequate facility for treatment of industrial and domestic effluent shall be provided before commissioning of the plant. Industry shall provide equalization and neutralization cum sedimentation tank of adequate capacity for treatment of de-mineralization plant resin regeneration effluent. Industry shall install cooling water re-circulating type cooling system for reuse of cooling water. The cooling water blow down shall be treated in lined sedimentation pond. Industry shall provide sewage treatment plant of adequate capacity for treatment of domestic effluent. In case of any failure of effluent treatment plant, it shall be immediately rectified or same alternate arrangement shall be provided by the industry. Industry shall ensure the treated effluent quality within standard prescribed by Chhattisgarh Environment Conservation Board published in Gazette notification Dated 25.03.1988. The major parameters of treated effluent shall not exceed the limits as follows :-

a	pH	5.5 - 9.0
b	BOD	30 mg/L
c	COD	250 mg/L
d	Oil and Grease	10 mg/L
e	Suspended Solids	100 mg/L

Chhattisgarh Environment Conservation Board may further stipulate stringent limit depending upon environmental conditions. The industry shall also ensure the treated effluent quality within standard prescribed by Ministry of Environment and Forests, Government of India/ Central Pollution Control Board.

3. Any liquid effluent what so ever generated from industrial activities shall not be discharged into the river or any surface water bodies under any circumstances. Treated effluent shall be reused wholly in the process/plantation etc. All the industrial effluent generated shall be re-circulated/reused after proper treatment. The untreated/treated domestic effluent shall not be discharge into the river or any surface water bodies. The treated domestic effluent shall be used for plantation purpose after proper disinfection. Industry shall make proper arrangements of suitable drains/pipe networks to ensure adequate flow for utilization of treated effluent inside the premises. The concept of zero discharge shall be maintained all the time.

4. Adequate measuring arrangement for the measurement of water utilized in different categories and effluent generated shall be provided before commissioning of the plant.
5. Industry shall provide adequate pollution control arrangements at all points and non point sources of emission before commissioning of the plant. Electro Static Precipitator having efficiency of not less than 99.8% (with designed emission of not more than 50 mg/Nm³ of particulate matter) with 1 x 125 tonnes per hour steam generation capacity boiler, suitable & effective air pollution control equipments for the control of fugitive emissions and for the control of dust emission during the handling & transportation of fuel and fly ash/bottom ash etc. shall be installed before commissioning of the plant. The emission of particulate matter from point sources shall be maintained less than 100 mg/Nm³ all the time. Chhattisgarh Environment Conservation Board may further stipulate stringent particulate matter emission limit depending upon environmental conditions.
6. Coal dust extraction and suppression systems shall be provided to control the fugitive dust emissions within and around the reject coal handling plant. Dust suppression systems shall be installed at all requisite points of dust emission in reject coal handling plant and reject coal stockyard etc. All junction points, transfer points and conveyor belts shall be covered to avoid fugitive emission.
7. The ambient air quality within the factory premises shall not exceed the standards prescribed by Chhattisgarh Environment Conservation Board in Gazette Notification dated 25.03.1988. The ambient air quality within the premises shall not exceed the following limits: -

a	Suspended Particulate Matter	500 Micrograms/ m ³
b	Sulphur Dioxide	120 Micrograms/ m ³
c	Oxides of Nitrogen	120 Micrograms/ m ³
d	CO	5000 Micrograms/ m ³

Industry shall ensure the ground level concentration of pollutants in ambient air within standard prescribed for residential, rural areas in the nearby residential/rural areas due to establishment/ commissioning of the power plant.

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8. Stack of height as per formulae $H=14(Q)^{0.34}$ (Where Q is emission rate of SO_2 in Kg/hr and H is stack height in meters) or as per guidelines of Ministry of Environment & Forests, Government of India/Central Pollution Control Board based on micro meteorological data or 90 meters (which ever will be more) with arrangement of stack monitoring shall be provided with boiler. The height of other stacks shall not be less than 30 meters also.
 9. Ambient air quality monitoring stations shall be established in the core zone as well as buffer zone for SPM, RPM, NO_x and SO_2 and CO. Adequate number of permanent ambient air quality monitoring station (not less than four) shall be set-up in the down wind direction as well as where maximum ground level concentrations are anticipated in consultation with the Board. Location and number of the ambient air quality stations shall be decided based on meteorological data, topographical features and environmentally and ecologically sensitive targets and the frequency of monitoring shall be undertaken in consultation with the Chhattisgarh Environment Conservation Board.
 10. Continuous monitoring system and opacity meter shall be installed for monitoring of emissions level both in the ambient and the stack before commissioning of the plant.
 11. Industry shall provide appropriate arrangement to meet the emission standards of SO_2 and NO_x , mercury and other toxic heavy metals to be developed by Ministry of Environment and Forests/Central Pollution Control Board.
 12. Industry shall monitor ground water quality, surface water quality around the project area regularly and report shall be submitted to the Board quarterly.
 13. Industry shall install separate electric metering arrangements for the running of pollution control device/devices. These arrangements shall be made in such a fashion that any non-functioning of pollution control device/devices shall immediately stop the electric supply to the production/fuel supply unit and shall remain tripped till the pollution control device/devices are made functional again to achieve the desired efficiency.
 14. Adequate arrangement shall be provided for proper storage, handling etc. of all solid wastes generated to avoid any fugitive

emission. Effective steps shall be taken for safe disposal of solid wastes and sludge. Industry shall obtain authorization from Board for management and handling of hazardous wastes as per Hazardous Wastes (Management and Handling) Rules, 1989 (as amended). All internal roads shall be made pucca before commissioning of the plant. Good house keeping practices shall be adopted by the industry.

15. Industry shall provide proper arrangement to control the noise pollution. Industry shall install appropriate noise barriers/control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation to control the noise. The ambient noise level shall not exceed 75 dB (A) during daytime and 70 dB (A) during night time within factory premises. Adequate measures shall be taken for control of noise levels below 85 dB (A) in the work environment.
16. Industry shall adopt dry ash extraction system and dry ash disposal system. Industry shall incorporate total fly ash utilization as integral part of the project. Ash generated from plant shall not be stored on land in open areas in any circumstances. The ash generated shall be stored in closed silos only. Fly ash and bottom ash generated shall be collected in dry form in storage silos as temporary storage and it shall be utilized 100% for other beneficial uses such as brick making, fly ash based products manufacturing, road construction, cement manufacturing, abandoned mines stoving, low lying areas filling etc. Industry shall provide ash storage silos of sufficient capacity so that total storage capacity of silos shall not be less than 7 days. If at any point of time all the storage silos completely filled with ash, then in that case industry shall shut down the power plant till such time the ash disposed to other beneficial uses. Industry shall install at least two fly ash brick/block manufacturing machine of sufficient capacity for utilization of fly ash before commissioning of the plant. Industry shall follow the guidelines, notification, direction etc. for utilization of fly ash/bottom ash issued by Ministry of Environment and Forests, Government of India/ Central Pollution Control Board/ Government of Chhattisgarh / Chhattisgarh Environment Conservation Board from time to time. Industry shall abide by the decisions taken by Ministry of Environment and Forests, Government of India/ Central Pollution Control Board/ Government of Chhattisgarh / Chhattisgarh Environment Conservation Board from time to time regarding use of fly ash /bottom ash.

17. Industry shall use fly ash bricks, fly ash blocks or fly ash based products for their construction/repairing activities. Industry shall also utilize fly ash/bottom ash for filling low lying within premises. Industry shall install at least one fly ash brick/block/products manufacturing machine of minimum capacity 1000 to 1200 brick/block per hour within three months before start of construction activities of super structure. Industry shall utilize the fly ash bricks/blocks etc. manufactured by own fly ash brick/block manufacturing machine in its construction activities. Industry shall procure fly ash from nearby power plants for manufacturing of fly ash brick/block/products till the commissioning of the 1 x 30 megawatt reject coal based power plant. After commissioning of the 1 x 30 megawatt reject coal based power plant, the fly ash generated from power plant shall be utilized for manufacturing of fly ash brick/block/products. Industry shall install one additional fly ash brick/block/products manufacturing machine of minimum capacity 1000 to 1200 brick/block per hour before commissioning of the plant.
18. The quality of coal used shall confirm to the standards prescribed by Ministry of Environment and Forests, Government of India/ Central Pollution Control Board/ Government of Chhattisgarh / Chhattisgarh Environment Conservation Board. Industry shall follow provisions of notification issued by Ministry of Environment & Forests, Government of India regarding use of beneficiated coal. Industry shall also follow the provisions of Charter on Corporate Responsibility for Environmental Protection issued by Government of India in this regard.
19. Extensive tree plantation shall be carried out in and around project area. At-least 30 - 40 meters wide green belt of broad leaf local species shall be developed all along the plant premises. At-least 60-75 meters wide green belt of broad leaf local species shall be developed along the boundary of the premises towards existing Dipika - Katghora Road. Industry shall procure additional land for this purpose (if required). Industry shall abide by the decisions taken by Ministry of Environment and Forests, Government of India/ Central Pollution Control Board/Government of Chhattisgarh/ Chhattisgarh Environment Conservation Board from time to time in this regard. Industry shall plant 1500 - 2000 saplings per hectare with broad leaf local species in consultation with local forest department.

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20. Garland drains with appropriate check dams shall be provided all along the fuel (reject coal)/solid wastes storage areas to avoid any possibility of erosion during rain. Garland drain (size, gradient & length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the project site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains. The surface run-off shall be de-silted through a series of check dams and drains before re-use/disposal.
 21. Industry shall adopt rain water harvesting technique in the project area and residential area (if any) for recharge of ground water. The rain harvesting technique shall be incorporated right from the design stage of all structures. Industry shall develop rainwater harvesting structures to harvest the rain water for utilization in the lean season as well as to recharge the ground water table.
 22. The construction of effluent treatment plant and installation of air pollution control equipments shall be taken up simultaneously with other civil/mechanical works. Industry shall submit technical details (Drawing, Design Criteria, Design Treatment Capacity and efficiency etc.) and copy of work orders of effluent treatment plant and air pollution control equipment to be installed within 3 months or before commissioning of the plant (whichever will be earlier).
 23. The space provision shall be provided in the layout and retrofitting of the Flue Gas De-Sulphurization (FGD) shall be carried out without delay, if 98th percentile values for SO₂ exceed the prescribed permissible limit for sensitive areas, rural, residential and other areas, based on actual monitored field data, after commissioning of the plant.
 24. Closed conveyor system shall be established in the land own by the industry for the transportation of reject coal from existing coal washery (belonging to industry situated adjoining to proposed thermal power site at Village - Kasaipalli) to proposed 1 x 30 = 30 megawatt reject coal based thermal power plant site.
 25. The layout of the proposed 1 x 30 megawatt reject coal based thermal power plant shall be such that the stack and other dust

generating units should be kept at least 500 meter away from the existing Dipika - Katghora Road.

26. Rapid Environmental Impact Assessment report along with detailed Environmental Management Plan shall be submitted within 06 months or before commissioning of the plant (whichever will be earlier). Comprehensive Environmental Impact Assessment (EIA) report covering one year data (4 seasons) shall be submitted to the Board within 15 months from date of commissioning of plant.
27. Industry shall establish an environment management cell to carryout function relating to environmental management under the supervision of senior executive who will directly report to the head of organization.
28. Industry shall obtain permission from competent authority to cut down trees (if any) before start of any construction activities.
29. Industry shall follow the action points mentioned in 'Charter on Corporate Responsibility for Environmental Protection' of Thermal Power Plant issued by ministry of Environment & Forest, Government of India.
30. Necessary fund shall be provided for implementation of the conditions to be incorporated in the 'Consent to Operate' of the Board and for environmental up-gradation/protection. The funds earmarked for environmental protection measures shall be kept in separate account and not diverted for any other purpose.
31. The total gross capital investment on all capital works including land, building, plant/machinery and equipments etc. for proposed 1 x 30 Megawatt reject coal based power plant shall not exceed Rs.93.98 Crores under any circumstances. Industry shall establish only 1 x 30 = 30 megawatt reject coal based thermal power plant at above mentioned site. Industry shall not envisage phased expansion of the power plant. The capacity of power generation of 1 x 30 = 30 megawatt reject coal based proposed thermal power plant shall not be expanded in future under any circumstances at this site as per affidavit submitted. In case of violation of any provision of E.I.A. Notification dated 27/01/1994 (as amended on), the permission issued by Chhattisgarh Environment Conservation Board shall be treated as null & void and management shall

obtain Environmental Clearance from Ministry of Environment and Forests, Government of India with immediate effect.

32. Industry shall abide by the direction or guidelines for sitting criteria of industry issued by Ministry of Environment and Forests, Government of India, New Delhi particularly in reference to land use. Industry shall abide by the decisions taken by Ministry of Environment and Forests, Government of India/ Central Pollution Control Board/ Government of Chhattisgarh / Chhattisgarh Environment Conservation Board from time to time in this regard.
33. Industry shall obtain statutory clearances/licenses from concerned Central/State Government Departments, Boards, Bodies and Corporations etc. before starting establishment of the power plant. Industry shall follow direction issued by Central/State Government, Central Pollution Control Board/Chhattisgarh Environment Conservation Board from time to time regarding control of water & air pollution and for environmental conservation.
34. Industry shall obtain the "No Objection Certificate" duly approved/recommended by Gram Sabha of concerned Gram Panchayats within 30 days and submit the same to the Board immediately after obtaining the same. Industry shall not start any construction activities related with 1 x 30 Megawatt reject coal based power plant without obtaining "No Objection Certificate" duly approved/recommended by Gram Sabha of Concerned Gram Panchayats, failing which this permission may be treated as cancelled.
35. The issuance of this permission does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Central, State or Local laws or regulations.
36. Industry shall follow any other conditions given at the time of grant of consent under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981.
37. Any change in production capacity, process, raw materials used, project profile etc. shall be intimated to the Board and prior permission of the Board shall be obtained for the same.

38. Board reserves the right to amend/cancel any of the above conditions, stringent the emission/effluent limits stipulated above and add new conditions as and when deemed necessary in the interest of environmental protection, change in the project profile or non-satisfactory implementation of the stipulated conditions etc.

The consent (for operation) as required under the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 shall be granted to your industry after fulfillment of all the conditions mentioned above. For this purpose you shall have to make an application to this Board in the prescribed Proforma at least two months before the expected date of commissioning of the plant. The applicant shall not without valid consent (for operation) of the Board bring into use any out let for the discharge of effluent and particulate matter/gaseous emission.

Issued with the approval of Competent Authority.

For & on behalf of
Chhattisgarh Environment Conservation Board


(R.P. Tiwari)
Superintending Engineer & Member Secretary
(Consent Committee)
Chhattisgarh Environment Conservation Board
Raipur (C.G.)

Endt. No. 827 /TS/CECB/2005

Raipur, Dated: 21 / 2 / 2005

Copy to: -

Regional Officer, Regional Office, Chhattisgarh Environment Conservation Board, Korba.


(R.P. Tiwari)
Superintending Engineer & Member Secretary
(Consent Committee)
Chhattisgarh Environment Conservation Board
Raipur (C.G.)