



**OFFICE OF THE
STATE POLLUTION CONTROL BOARD, ORISSA**
Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII,
Bhubaneswar - 751 012

BY REGD POST

No. 17335 /

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Date 25-X-10

OFFICE MEMORANDUM

In consideration of the application for obtaining Consent to Establish for **Bharatpur Open Cast Project of Mahanadi Coal Fields Limited.,(Expansion)** the State Pollution Control Board has been pleased to convey its Consent to Establish under section 25 of Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & Control of Pollution) Act, 1981 for **increase in production of Coal from 15 Million Ton/Annum to 20 Million Ton/Annum(Over mine lease hold area of 1324.80 Ha) at – Kalinga Area, PO:N.S. Nagar in the district of Angul** with the following conditions.

GENERAL CONDITIONS.

1. This Consent to establish is valid for the product, quantity manufacturing process and raw materials as mentioned above & for a period of five years from the date of issue of this letter, provided commencement of production of the proposed project has not taken place in the meantime.
2. If the proponent fails to start operation of the project but substantial physical progress has been made then a renewal of this consent shall be sought by the proponent.
3. Adequate effluent treatment facilities are to be provided such that the quality of sewage and trade effluent satisfies the standards as prescribed under EP Rule or as prescribed by the Central Pollution Control Board and/or State Pollution Control Board or otherwise stipulated in the special conditions.
4. All emission from the industry as well as the ambient air quality and noise are to conform to the standards as laid down under EP Rule/Central Pollution Control Board/State Pollution Control Board of otherwise stipulated in the special conditions.
5. Adequate method of disposal of solid waste is to be adopted to avoid environmental pollution.
6. The industry is to comply to the provisions of EP Act, 1986 and the rules made there under with their amendments from time to time such as the Hazardous Chemical/Manufacture, Storage and Import Rule, 1989 etc. The industry is also to comply to provisions of Public Liability Insurance Act, 1991, if applicable.

7. The industry is to apply for grant of Consent to operate under section 25/26 of Water(Prevention & Control of Pollution)Act, 1974 & Air (Prevention & Control of Pollution)Act, 1981 (If coming under air pollution control area) at least 3 (three) months before the commercial production and obtain Consent to Operate.
8. **This consent to establish is subject to statutory and other clearances from Govt. of Orissa and / or Govt. of India as and when applicable.**

SPECIAL CONDITIONS :-

1. The mine has to seek environmental clearance as per EIA notification -2006 and mining activity for the expansion proposal shall commence after obtaining environmental clearance. This consent to establish is subject to grant of environmental clearance by MoEF, Govt. of India.
2. A bank guarantee commensurate with the production level will be taken by the Board for continuous satisfactory environmental compliance of the mining during the period for which consent to operate is granted as and where required.
3. The mine shall obtain forest clearance under Forest (Conservation) Act., 1980 if there is involvement of forest land in the mining lease area.
4. No change in mining technology and scope of working shall be made without prior approval of the Board.
5. Top soil should be stacked properly with proper slope at earmarked site (s) with adequate measures and shall be used for reclamation and rehabilitation of mined out areas.
6. Concurrent back -filling shall be carried out as prescribed under Mine Plan. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self - sustaining. Compliance status should be submitted to the Ministry of Environment & Forests with a copy to the Board on yearly basis.
7. Reclamation programme along with the post closure plan is to be submitted within 06 months from the date of issue of this order. Garland drains (size, gradient and 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 mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.

8. Dimension of the retaining wall at the toe of dumps and OB benches within the mine to check run – off and siltation shall be based on the rainfall data. The detail specification shall be worked out and submitted to the Board.
9. Catch drains, and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The drains shall be regularly desilted and maintained properly.
10. Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells. The monitoring should be done four times a year in pre-monsoon (April/May), monsoon (August), Post – monsoon (November) and winter (January) seasons. Data thus collected should be submitted to the Board quarterly.
11. Domestic effluent generated from the colony and mines shall be treated in STP so as to meet the prescribed standard such as pH = 6.5-8, SS = 50mg/l, BOD= 30 mg/l & O&G = 5 mg/l and shall be reused for greenbelt development.
12. Wastewater (Workshop) shall be properly collected, treated in ETP consists of primary settling tank, O&G trap, flash mixer with chemical dosing and secondary settling tank so as to conform the prescribed standard pH = 5.5-9, SS = 100mg/l, O&G = 10 mg/l and Nitrate Nitrogen = 10 mg/l or as amended from time to time and reused for washing with make-up water.
13. Mine drainage water, shall be treated properly in adequate size settling tanks with coagulation and chemical dosing facilities. The mine shall explore to reuse it for dust suppression, green belt and vehicle washing. Balance treated mine drainage water shall be discharged to near by surface waterbodies after conforming to the standard prescribed by the Board i.e. pH =6.5 to 8.0, total SS = 50mg/l, O&G = 05mg/l and other parameters conforming to standards for discharge to inland surface water as prescribed under EP Act, 1986.
14. **Turbidity in the surface water at Jilinda village is high. So, Surface run-off from OB dump area, coal pile area and top soil storage area shall be routed through adequate settling pond (designed maximum hourly rain fall basis) to meet prescribed standard of SS-50 mg/l and O& Grease-5 mg/l before discharge into Bangur nalla during monsoon.**

15. Rain water harvesting practice shall be followed by utilizing the rain water collected from the roof of the buildings for recharging of ground water within the premises and other large structures as per the concept and practices prescribed by CPCB, New Delhi and details of which is available in the web site.
16. **A pit is earmarked for ash disposal by NALCO. This is likely to affect the recharging of ground water. So adequate measures shall be taken to avoid this.**
17. Dust extraction system and dry fog system shall be provided in coal handling plant. Crusher house shall be enclosed. Transfer points shall be provided with dry fog system. Belt conveyor shall be enclosed.
18. Spillage shall be prevented by avoiding overloading.
19. Provision of movable chutes during loading at CHP to avoid free fall.
20. Water sprinkling shall be carried out on unplanted surface of OB dump to control fugitive emission.
21. The mine shall take adequate preventive measures for spontaneous fire in the coal seam as well as stack yard.
22. Drill should be wet operated or with dust extractors and controlled blasting should be practiced.
23. The mine shall provide water or water mixed chemicals for dust suppression at all strategic points such as coal stack yards, loading and unloading points, all transfer points, conveyors etc. to suppress dust fine atomizer nozzles arrangement shall be provided on the coal heaps and on land around the crusher / pulverizes. As far as possible conveyors and transfer points etc. shall be provided with enclosures.
24. Six ambient air quality monitoring stations for 24 hours operation should be established in the core zone as well as in the buffer zone for PM₁₀, PM_{2.5}, SO₂, NO_x, and CO monitoring. Location of the stations should be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.
25. Data on ambient air quality (PM₁₀, PM_{2.5}, SO₂, NO_x and CO) shall be regularly submitted to the State Pollution Control Board once in six months.
26. The haul roads and arterial roads shall be made black topped / concrete with avenue plantation.

27. Present guideline for old stock shall be followed.
28. A green belt of adequate width and density preferably with local species along the periphery of the mine shall be raised so as to provide protection against particulates and noise. It must be ensured that at least 33% of the total land area shall be under permanent green cover. The proponent shall ensure the maintenance of green belt throughout the year and for all time to come. It is advised that they may engage professionals in this field for creation and maintenance of the green belt. An action plan for this purpose shall be prepared and shall be submitted accordingly.
29. Adequate measures shall be taken for control of noise levels below 85 dB (A) in the work environment.
30. Some recent approaches in suitable blast designs shall be used in consultation with academic (NIT- Rourkela) or research organizations instead of very old USBM formula for reducing the impact of ground vibrations due to blasting.
31. Although surface miner is used for 40% of production, blast damage need to be assessed (for 60% source of breaking the OB/mineral) through recently proven techniques and practices.
32. Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
33. A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the organization.
34. All efforts shall be taken to protect the existing water bodies in the surrounding. A definite plan in this regard shall be submitted to the Board within 06 months from the date of issue of this order.
35. The Board may impose further condition or modify the conditions stipulated in this order during installation, and / or at the time of obtaining consent to operate and may revoke this clearance in case the stipulated conditions are not implemented and / or any information suppressed in the application form.
36. The above conditions will be enforced, inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 the Air (Prevention & Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

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20/10/12
MEMBER SECRETARY *TC*