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03/08/09

BY REGD POST

OFFICE OF THE
STATE POLLUTION CONTROL BOARD, ORISSA

Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII,
Bhubaneswar - 751 012

E.D. (F&E)
31/08/09

No. 1211 /Ind-II-NOC- 4701

Date 30.7.09

OFFICE MEMORANDUM

In consideration of the application for obtaining Consent to Establish for M/s. Bangur Chromite Mines of Orissa Mining Corporation Ltd., 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 Chromite Ore of quantity from 12000 Ton/Annum to 60,000 Ton/Annum (over mine lease hold area of 139.94 Ha.) through under ground mining, AT/PO: Dhanurjoypur, Dist-Keonjhar in the district of Keonjhar 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 or 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 thereunder 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 the 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 the EIA notification 2006. However, commencement of mining activity for proposed expansion shall be done after obtaining environmental clearance from 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 mine during the period for which consent to operate is granted as and where required.
- 3 The increase in production will be achieved through following equipment and machineries.

Unit Operation	Name of the machines	Nos.	Capacity	Make	Motive Power	HP/Model
Drilling	Jack-Hammer Drill (32 mm dia)	3	100 cfm	Atlas	Compressed air	RH656-4W
	Stopper (32 mm dia)	1	100 cfm	Copco	-do-	-do-
	Simba Jr. Drill (57 mm dia)	1	350 cfm	-do-	-do-	BBC-120E
	DTH drill (110 mm dia)	1	350 cfm	-do-	-do-	BVB-25
Excavation and loading	Rocker Shovel	1	0.2m3	EIMCO ELECON	-do-	8HP
Underground haulage	Double drum winder	1	2t	MAMC	Electric	200 HP
	Single Drum winder	1	1t	VOLTAS	-do-	40 HP
	U-Tubs	15	1t	-	-	-
Surface Transport	Trucks / Tippers	As required	10t	-	Diesel Engine	-
Drainage	Centrifugal pumps	2	2500 LPM	-	Electric	30HP
Ventilation	Main mechanical ventilator	1	1000 m3/min	-	-	30 HP

- 4 No change in mining technology and scope of working shall be made without prior approval of the Board.
- 5 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.
- 6 A green belt of adequate width and density preferably with local species along the periphery of the plant 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.

- 7 Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from, QB and mineral dumps. The drains should be regularly de-silted and maintained properly. The garland drains (size, gradient and length) and sump capacity should 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. Run off water contaminated with Cr^{+6} shall be routed through ETP for hexavalent chromium treatment before discharge to nearby surface water body and shall meet Board's prescribed standard.
- 8 Regular monitoring of ground water level and quality should be carried out by establishing a net work 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. Following heavy metals need to be monitored at least once during post monsoon period whose values shall not exceed as per following standard.
- | | | | |
|------|---------|---|-----------|
| i) | Cd | - | 2.0 mg/l |
| ii) | Cr+6 | - | 0.10 mg/l |
| iii) | Copper | - | 3.0 mg/l |
| iv) | Lead | - | 0.10 mg/l |
| v) | Mercury | - | 0.01 mg/l |
| vi) | Nickel | - | 0.50 mg/l |
| vii) | Zinc | - | 5.0 mg/l |
- 9 Domestic effluent shall be discharged to soak pit via septic tank constructed as per BIS specification.
- 10 Wastewater (workshop, wastewater from the mine i.e. pit water, check dams or any other discharge leaving lease boundary of the mine) should be properly collected, treated so as to conform the prescribed standard i.e pH = 6 – 9.0, SS = 50 mg/l, & O & G = 5 mg/l and dissolved iron as Fe – 2 mg/l or as amended from time to time. Oil and grease trap should be installed before discharge of effluents from workshop.
- 11 Mine drainage water, shall be treated in a full fledged effluent treatment plant discharged after conforming to the standard prescribed by the Board i.e. pH – 6 – 9.0, Total SS = 50 mg/l & O & G = 5 mg/l and Cr^{+6} = 0.1 mg/l.
- 12 Drill should be wet operated or with dust extractors and controlled blasting should be practices.
- 13 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 RPM, SPM, SO_2 , NO_x and CO monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board (i) Data on ambient air quality (RPM, SPM, SO_2 , NO_x and CO) should be regularly submitted to the State Pollution Control Board once in six months.
- 14 Adequate measures to control fugitive emission shall be taken during loading and transportation of minerals, haul roads, drilling, excavation, ore stack pile and truck loading areas.

- 15 The speed of dumpers / trucks on haul roads shall be controlled as increased speed increases dust emission. Overloading of transport vehicles shall be avoided.
- 16 Air blast level resulting from blasting on any premises or public place must not exceed 90 dB linear, peak at any other premises outside the period between 7 AM and 6 PM on any day.
- 17 Pre-wetting of Blasting site shall be practiced.
- 18 Use site specific scientific blast design using modern software.
- 19 Optimized blasting methods shall be practiced i.e matching the explosive to the drilling pattern, rock characteristics and proper stemming of the holes.
- 20 Site specific drilling pattern, optimum charging of explosives, adequate stemming and introduction of delays shall be practiced.
- 21 During transportation of ore by trucks through public roads, the truck shall be properly covered with tarpaulin sheets / leak proof coverings and shall ply at safe speed.
- 22 Dust suppression on mine haul roads, OB dumps shall be done by spraying water through water sprinklers along with chemical binders/wetting agents at frequent interval in order to reduce water consumption and to improve retention and re-absorption capacity of water. The additive chemicals should not have any adverse impact on the environment. Water sprinklers of fixed type shall also be provided at the mine HEMM maintenance shop, other service centers and approach roads from mines to prevent the generation of dust to be air borne.
- 23 Regular collection of spilled over raw material from haul roads shall be practiced to prevent the generation of dust due to movement of dumpers /truck.
- 24 At stockpile and loading plant area, a net work of drains with concrete bottom shall be constructed at a depth of 1.5 meter below the lowest level on the sites parallel to the stockpile area with interconnected box culverts. The sloping of surface shall be given inward to the stockpiles so that surface water will only infiltrate in to the drain.
- 25 To arrest the slimes/suspended solid fine particles flowing through the streams a no. of check dams shall be constructed across the original course of the stream along with wire mesh and boulders. De-silting of check dams shall be done at regular interval during non-monsoon period.
- 26 Riverine afforestation shall be practiced to prevent soil erosion during monsoon.
- 27 Noise is best abated at source by selecting right machinery and equipment by proper mounting of equipment by providing noise insulating enclosures or padding as far as possible.
- 28 Noise barriers shall be constructed between sources and affected areas (thick belt of trees around mine boundaries, waste dumps, hills and mountainous land forms can act as such barrier).
- 29 Safety fuse shall be covered with sand layer of 15 cm thick in order to reduce noise level during blasting operation.
- 30 Occupational exposure limit of noise limit for ground vibration at the foundation level and permissible peak particle velocity (PPV) at the foundation level of structures in the mining areas as specified by DGMS shall be complied with by the chromite mines.
- 31 Adequate measures shall be taken for control of noise levels in the work environment of mine area so that noise levels at the boundary line of M.L area shall not exceed 75 dB(A) during day time (6 AM to 10 AM) and 70 dB(A) during night time (10, PM to 6 AM)

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- 32 The waste dumps shall be located away from the natural nalls, rivers in the area and on an impervious & non-mineralised area to minimize the water pollution.
- 33 The OB/waste dumps shall be properly dressed benched stopped at low angle with terracing and bamboo barricades in the slopes making retaining walls stone barriers at the toe of the dumps gully plugging etc to prevent the solid erosion.
- 34 The completed out slope of the waste dumps should not exceed 20 degrees from horizontal to avoid excessive erosion.
- 35 Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
- 36 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.
- 37 The above conditions will be enforced, inter-alia, under the provisions of the water (Prevention & Control of pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 and Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rule.
- 38 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 month from the date of issue of this order.
- 39 This consent to establish is granted subject to grant of Explosive License from competent Authority. The valid Explosive License must be submitted to this Board while applying for consent to operate to this Board.
- 40 The Board may impose further conditions 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.
- 41 The mine shall abide by all the provisions of Environment (Protection) Act, 1986 and rules framed thereunder.
- 42 The mine shall obtain forest clearance under Forest (Conservation) Act, 1980 if there is involvement of forest land in the mining lease area.
- 43 **The mine shall carryout mining activities as per mining plan approved by IBM.**

To,

**The Deputy General Manager, (Geo),
Orissa Mining Corporation Ltd.,
Po. Box. No. 34,
Bhubaneswar – 751 001**

Memo No. _____/Dt.

Copy forwarded to :

1. Secretary Steels & Mines, Govt. of Orissa, Bhubaneswar
2. Collector, Keonjhar
3. District Industries Centre, Keonjhar
4. Consent Section
5. Director, Factories & Boiler, Bhubaneswar
6. Regional Officer, O.S.P.C. Board, Keonjhar
7. DFO, Keonjhar
8. Copy to Guard file

Sda
22/7/00
MEMBER SECRETARY

/ **Sec. ENV. ENGINEER (N)**

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Consent to Establish
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BY REGD. POST



**OFFICE OF THE
STATE POLLUTION CONTROL BOARD, ODISHA**

Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII,
Bhubaneswar - 751 012

No. 4298 /

IND-II-NOC - 4701

Date 11-03-2016

OFFICE MEMORANDUM

In consideration of the application no. 555701 received through online and recommendation of the consent committee in its meeting held on 18.02.2016, the State Pollution Control Board has been pleased to **extend the validity period of consent to establish order issued vide letter No. 12111, dt. 30.07.2009 to Bangur Chromite Mines of M/s Orissa Mining Corporation Ltd., for a period of five years i.e. till 29.07.2019 (i.e., from the date of expiry of above consent to establish order on dated 30.07.2014) for increase in production of chromite ore quantity from 12000 TPA to 60,000 TPA (over mine lease hold area of 139.94 ha.) through underground mining, At/Po – Dhanurjaypur, in the district of Keonjhar, Odisha.**

All other matter/ conditions as given in the above consent to establish order vide letter No. 12111, dated 30.07.2009 shall be remain unchanged.


MEMBER SECRETARY

To

✓ The Mines Manager,
Bangur Chromite Mines of
M/s Orissa Mining Corporation Ltd.,
At/Po- Dhanurjaypur,
Dist – Keonjhar – 758078

Memo No. _____ /Dt. _____ /

Copy forwarded to:

1. The Secretary Steels & Mines, Govt. of Odisha, Bhubaneswar
2. The Director, Directorate of Mines, Govt. of Odisha, Bhubaneswar
3. The District Magistrate & Collector, Keonjhar.
4. The Regional Officer, SPC Board, Keonjhar.
5. Consent to Operate Section, SPC Board, BBSR
6. Hazardous Waste Cell, SPC Board, BBSR
7. The DFO, Keonjhar.
8. Copy to Guard file.

SR. ENV. ENGINEER-L-II

SAC (F&E)
11/3/16
11/3/16

