

BY REGD POST



OFFICE OF THE
STATE POLLUTION CONTROL BOARD, ORISSA

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

No

15874

/Ind-II-NOC- 4426

Date

4-7-02

OFFICE MEMORANDUM

In consideration of the application for obtaining Consent to Establish for M/s. Gandhamardan - A Iron Ore Mine of M/s. OMC 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 production enhancement of Iron ore of quantity 0.25 MTPA to 0.35 MTPA (over mine lease hold area of 618.576 Ha.) At /PO- Suakati 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 If the proponent fails to initiate construction of the project and no significant physical progress is made then, the proponent has to apply for consent to establish afresh after expiry of 5 years from the date of issue of this order
- 4 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.
- 5 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
- 6 Adequate method of disposal of solid waste is to be adopted to avoid environmental pollution

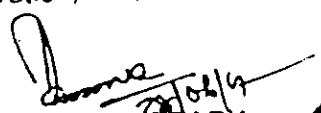
- 7 The industry is to comply to the provisions of EP Act, 1986 and the rules made thereunder with their amendments from time to time such as the Hazardous Chemical/Manufacture, Storage and Import Rule, 1989 etc. The industry is also to comply to the provisions of Public Liability Insurance Act, 1991, if applicable.
- 8 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.
- 9 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 or as recommended by EAC/SEAC. However, commencement of mining activity for proposed expansion shall be done after obtaining environmental clearance or as recommended by EIAA/SEIAA.
2. No change in mining technology and scope of working shall be made without prior approval of the Board.
3. 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.
4. Concurrent back-filling should be started from the fourth year of operation. 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.
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 shall be raised for suppression of dust by planting the native species around to ML area, roads, OB dump sites, etc. in consultation with the local DFO/Agriculture Department.
7. Reclamation programme along with the post closure plan is to be submitted within 06 months from the date of issue of this order.
8. 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 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.
9. 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.
10. Sewage treatment plant should be installed for the treatment of domestic effluent generated from the colony and mines so as to meet the prescribed standard of the Board for discharge to inland surface water.

- 11 Wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform the prescribed standard i.e pH = 5.5 - 9.0 SS = 100 mg/l & O & G = 10 mg/l or as amended from time to time. Oil and grease trap should be installed before discharge of effluents from workshop. Domestic effluent shall be discharged to soak pit via septic tank.
- 12 Mine drainage water, if any has to be treated and disposed of after conforming to the standard prescribed by the Board i.e pH = 5.5 - 9.0. Total SS = 100 mg/l & O & G = 10 mg/l.
- 13 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.
- 14 Drill should be wet operated or with dust extractors and controlled blasting should be practices.
- 15 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, SO₂, 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, SO₂, NO_x and CO) should be regularly submitted to the State Pollution Control Board once in six months.
- 16 Adequate measures to control fugitive emission shall be taken during loading and transportation of minerals, haul roads etc.
- 17 The haulage roads and arterial roads shall be made black topped / concrete with avenue plantation. Appropriate plan to this effect shall be submitted to the board within a month. Initially 50% of haul road shall be black topped/concrete surfaced.
- 18 Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment.
- 19 Project authority shall undertake sample survey to generate data on pre-project community health status within a radius of 1 km from proposed mine. The report shall be submitted within 06 months from the date of issue of this order.
- 20 Consent to operate shall be obtained from this Board before commencing the mining activities of proposed expansion project.
- 21 Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
- 22 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.
- 23 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.
- 24 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.
- 25 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.

- 26 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
- 27 The industry shall abide by all the provisions of Environment (Protection) Act 1986 and rules framed thereunder
- 28 The unit shall provide bag filter as well as dry fog system at all potential dust generating points of iron ore crusher plants and screening plants to control fugitive emission. Ambient air quality with respect to SPM concentration shall not exceed $500 \mu\text{g}/\text{m}^3$
- 29 The mine shall obtain forest clearance under Forest (Conservation) Act, 1980 if there is involvement of forest land in the mining lease area


MEMBER SECRETARY

To

Sri J. Mishra, Deputy General Manager(Geo).
M/s OMC Ltd
OMC House PO Box No 34
Bhubaneswar

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

SR. ENV. ENGINEER(N)



CONSENT ORDER

Page 1

BY REGD. POST WITH AD

STATE POLLUTION CONTROL BOARD, ORISSA

A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012

Phone-2561909, Fax: 2562822, 2560955

CONSENT ORDER

No. 5999 /IND-I-CON-6050Dt. 7.4.11CONSENT ORDER NO. 2539

Sub : Consent for discharge of sewage and trade effluent under section 25/26 of Water (PCP) Act, 1974 and for existing / new operation of the plant under section 21 of Air (PCP) Act, 1981.

Ref : Your application No. 4994/OMC/ROG/10, Dt. 8/12/2010

Consent to operate is hereby granted under section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of Air (Prevention & Control of Pollution) Act, 1981 and rules framed thereunder to

Name of the Industry Gandhamardan Iron Ore Mines (Block -A), OMC Ltd

Name of the Occupier & Designation Bijaya Ku. Behera, Regional Manager

Address At/Po - Suakati, Dist - Keonjhar

This consent order is valid for the period up to 31.03.2016

This consent order is valid for the product quantity, specified outlets, discharge quantity and quality, specified chimney/stack, emission quantity and quality of emissions as specified below. This consent is granted subject to the general and special conditions stipulated therein.

A. Details of Products Manufactured

Sl. No.	Product	Quantity
1.	Iron Ore	0.35 MTPA

B. Discharge permitted through the following outlet subject to the standard

Outlet No.	Description of outlet	Point of discharge	Quantity of discharge KLD or KL/hr	Pre-scribed Standard			
				pH	TSS (mg/l)	Oil & Grease (mg/l)	BOD (mg/l)
01.	Domestic effluent	Septic tank and soak pit	--	5.5 to 9.0	200	--	100
02.	Mine drainage water / surface run off/ other waste water	Nearby land / inland surface water	--	5.5 to 9.0	100 (Rainy day)	10	--
					50 (Non rainy day)		

C. Emission permitted through the following stack subject to the prescribed standard

Chimney Stack No.	Description of Stack	Stack height (m)	Quantity of emission	Prescribed Standard				
				PM	SO ₂	NO _x		

D. Disposal of solid waste permitted in the following manner

Sl. No.	Type of Solid waste	Quantity generated (TPD)	Quantity to be reused on site (TPD)	Quantity to be reused off site (TPD)	Quantity disposed off (TPD)	Description of disposal site.
01.	Top Soil / Overburden	As per approved mining plan	--	--	--	As per approved mining plan

**E. GENERAL CONDITIONS FOR ALL UNITS**

1. The consent is given by the Board in consideration of the particulars given in the application. Any change or alternation or deviation made in actual practice from the particulars furnished in the application will also be the ground liable for review/variation/revocation of the consent order under section 27 of the Act of Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & Control of Pollution) Act, 1981 and to make such variations as deemed fit for the purpose of the Acts.
2. The Industry would immediately submit revised application for consent to operate to this Board in the event of any change in the quantity and quality of raw material / and products / manufacturing process or quantity /quality of the effluent rate of emission / air pollution control equipment / system etc.
3. The applicant shall not change or alter either the quality or quantity or the rate of discharge or temperature or the route of discharge without the previous written permission of the Board.
4. The application shall comply with and carry out the directives/orders issued by the Board in this consent order and at all subsequent times without any negligence on his part. In case of non-compliance of any order/directives issued at any time and/or violation of the terms and conditions of this consent order, the applicant shall be liable for legal action as per the provisions of the Law/Act.
5. The applicant shall make an application for grant of fresh consent at least 90 days before the date of expiry of this consent order.
6. The issuance of this consent does not convey any property right 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 laws or regulation.
7. This consent does not authorize or approve the construction of any physical structure or facilities or the undertaking of any work in any natural water course.
8. The applicant shall display this consent granted to him in a prominent place for perusal of the public and inspecting officers of this Board.
9. An inspection book shall be opened and made available to Board's Officers during the visit to the factory.
10. The applicant shall furnish to the visiting officer of the Board any information regarding the construction, installation or operation of the plant or of effluent treatment system / air pollution control system / stack monitoring system any other particulars as may be pertinent to preventing and controlling pollution of Water / Air.
11. Meters must be affixed at the entrance of the water supply connection so that such meters are easily accessible for inspection and maintenance and for other purposes of the Act provided that the place where it is affixed shall in no case be at a point before which water has been tapped by the consumer for utilization for any purposes whatsoever.
12. Separate meters with necessary pipe-line for assessing the quantity of water used for each of the purposes mentioned below:
 - a) Industrial cooling, spraying in mine pits or boiler feed,
 - b) Domestic purpose
 - c) Process
13. The applicant shall display suitable caution board at the place where the effluent is entering into any water-body or any other place to be indicated by the Board, indicating therein that the area into which the effluents are being discharged is not fit for the domestic use/bathing.
14. Storm water shall not be allowed to mix with the trade and/or domestic effluent on the upstream of the terminal manholes where the flow measuring devices will be installed.
15. The applicant shall maintain good house-keeping both within the factory and the premises. All pipes, valves, sewers and drains shall be leak-proof. Floor washing shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas.
16. The applicant shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by him to achieve with the term(s) and conditions of the consent.
17. Care should be taken to keep the anaerobic lagoons, if any, biologically active and not utilized as mere stagnation ponds. The anaerobic lagoons should be fed with the required nutrients for effective digestion. Lagoons should be constructed with sides and bottom made impervious.
18. The utilization of treated effluent on factory's own land, if any, should be completed and there should be no possibility of the effluent gaining access into any drainage channel or other water courses either directly or by overflow.
19. The effluent disposal on land, if any, should be done without creating any nuisance to the surroundings or inundation of the lands at any time.
20. If at any time the disposal of treated effluent on land becomes incomplete or unsatisfactory or create any problem or becomes a matter of dispute, the industry must adopt alternate satisfactory treatment and disposal measures.
21. The sludge from treatment units shall be dried in sludge drying beds and the drained liquid shall be taken to equalization tank.
22. The effluent treatment units and disposal measures shall become operative at the time of commencement of production.
23. The applicant shall provide port holes for sampling the emissions and access platform for carrying out stack sampling and provide electrical outlet points and other arrangements for chimneys/slacks and other sources of emissions so as to collect samples of emission by the Board or the applicant at any time in accordance with the provision of the Act or Rules made therein.
24. The applicant shall provide all facilities and render required assistance to the Board staff for collection of samples / stack monitoring / inspection.



CONSENT ORDER

Page 4

25. The applicant shall not change or alter either the quality or quantity or rate of emission or install, replace or alter the air pollution control equipment or change the raw material or manufacturing process resulting in any change in quality and/or quantity of emissions, without the previous written permission of the Board.
26. No control equipments or chimney shall be altered or replaced or as the case may be erected or re-erected except with the previous approval of the Board.
27. The liquid effluent arising out of the operation of the air pollution control equipment shall be treated in the manner and to ion of standards prescribed by the Board in accordance with the provisions of Water (Pravention and Control of Pollution) Act, 1974 (as amended).
28. The stack monitoring system employed by the applicant shall be opened for inspection to this Board at any time.
29. There shall not be any fugitive or episodal discharga from the premises.
30. In case of such episodal discharge/emissions the industry shall take immediate action to bring down the emission within the limits prescribed by the Board in conditions/stop the operation of the plant. Report of such accidental discharge /emission shall be brought to the notice of the Board within 24 hours of occurrence.
31. The applicant shall keep the premises of the industrial plant and air pollution control equipments clean and make all hoods, pipes, valves, stacks/chimneys leak proof. The air pollution control equipments, location, inspection chambers, sampling port holes shall be made easily accessible at all times.
32. Any upset condition in any of the plant/plants of the factory which is likely to result in increased effluent discharge/emission of air pollutant's and / or result in violation of the standards mentioned above shall be reported to the Headquarters and Regional Office of the Board by speed post within 24 hours of its occurrence.
33. The industry has to ensure that minimum three varieties of trees are planted at the density of not less than 1000 trees per acre. The trees may be planted along boundaries of the industries or industrial premises. This plantation is stipulated over and above the bulk plantation of trees in that area.
34. The solid waste such as sweeping, wastage packages, empty containers residues, sludge including that from air pollution control equipments collected within the premises of the industrial plants shall be disposed off scientifically to the satisfaction of the Board, so as no to cause fugitiva emission, dust problems through leaching etc., of any kind.
35. All solid wastes arising in the premises shall be properly classified and disposed off to the satisfaction of the Board by :
 - i) Land fill in case of inert material, care being taken to ensure that the material does not give rise to leachate which may percolate into ground water or carried away with storm run-off.
 - ii) Controlled incineration, wherever possible in case of combustible organic material.
 - iii) Composting, in case of bio-degradable material.
36. Any toxic material shall be detoxicated if possible, otherwise be sealed in steel drums and buried in protected areas after obtaining approval of this Board in writing. The detoxication or sealing and burying shall be carried out in the presence of Board's authorized persons only. Letter of authorization shall be obtained for handling and disposal of hazardous wastes.
37. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any control equipment either in whole or in part) this Board shall after giving the applicant an opportunity of being heard, vary all or any of such condition and thereupon the applicant shall be bound to comply with the conditions so varied.
38. The applicant, his/heirs/legal representatives or assignees shall have no claim whatsoever to the condition or renewal of this consent after the expiry period of this consent.
39. The Board reserves the right to review, impose additional conditions or condition, revoke change or alter the terms and conditions of the consent.
40. Notwithstanding anything contained in this conditional letter of consent, the Board hereby reserves to it the right and power under section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 to review any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Act by the Board.
41. The conditions imposed as above shall continue to be in force until revoked under section 27(2) of the Water (Pravention & Control of Pollution) Act, 1974 and section 21 A of Air (Prevention & Control of Pollution) Act, 1981.
42. In case the consent fee is revised upward during this period, the industry shall pay the differential fees to the Board (for the remaining years) to keep the consent order in force. If they fail to pay the amount within the period stipulated by the Board the consent order will be revoked without prior notice.
43. The Board reserves the right to revoke/refuse consent to operate at any time during period for which consent is granted in case any violation is observed and to modify/ stipulate additional conditions as deemed appropriate

GENERAL CONDITIONS FOR UNITS WITH INVESTMENT OF MORE THAN Rs 50 CRORES, AND 17 CATEGORIES OF HIGHLY POLLUTING INDUSTRIES (RED A).

1. The applicant shall analyse the emissions every month for the parameters indicated in TABLE B & C as mentioned in this order and shall furnish the report thereof to the Board by the 10th of the succeeding month.
2. The applicant shall provide and maintain at his own cost three ambient air quality monitoring stations for monitoring Suspended Particulate Matter, Sulphur Dioxide, Oxides of Nitrogen, Hydro-Carbon, Carbon-Monoxide and monitor the same once in a day/week/fortnight/month. The data collected shall be maintained in a register and a monthly extract be furnished to the Board.
3. The applicant shall provide and maintain at his own cost a meteorological station to collect the data on wind velocity, direction, temperature, humidity, rainfall, etc. and the daily reading shall be recorded and the extract sent to the Board once in a month.



CONSENT ORDER

Page 5

4. The applicant shall forward the following information to the Member Secretary, State Pollution Control Board, Orissa, Bhubaneswar regularly.
 - a. Report of analysis of stack monitoring, ambient air quality monitoring meteorological data as required every month.
 - b. Progress on planting of trees quarterly.
5. The applicant shall install mechanical composite sampling equipment and continuous flow measuring / recording devices on the effluent drains of trade as well as domestic effluent. A record of daily discharge shall be maintained.
6. The following information shall be forwarded to the Member Secretary on or before 10th of every month.
 - a. Performance / progress of the treatment plant.
 - b. Monthly statement of daily discharge of domestic and/or trade effluent.

7. Non-compliance with effluent limitations

- a) If for any reason the applicant does not comply with or is unable to comply with any effluent limitations specified in this consent, the applicant shall immediately notify the consent issuing authority by telephone and provide the consent issuing authority with the following information in writing within 5 days of such notification.
 - i) Causes of non-compliance
 - ii) A description of the non-compliance discharge including its impact on the receiving waters.
 - iii) Anticipated time of continuance of non-compliance if expected to continue or if such condition has been corrected the duration or period of non-compliance.
 - iv) Steps taken by the applicant to reduce and eliminate the non-complying discharge and
 - v) Steps to be taken by the applicant too prevent the condition of non-compliance.
- b) The applicant shall take all reasonable steps to minimize any adverse impact to natural waters resulting from non-compliance with any effluent limitation specified in this consent including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.
- c) Nothing in this consent shall be construed to relieve the applicant from civil or criminal penalties for non-compliance whether or not such non-compliance is due to factors beyond his control, such as break-down, electric failure, accident or natural disaster.

8. The applicant shall at his own cost get the effluent samples collected both before and after treatment and get them analysed at an approval laboratory every month for the parameters indicated in Part-D and shall submit in duplicate the report thereof to the Board.
9. The addition of various treatment chemicals should be done only with mechanical dosers and proper equipment for regulation of correct dosages determined daily and for proper uniform feeding. Crude practices such as dumping of chemicals in drains or sumps or trickling of acids or alkalis arbitrarily and utilizing poles for stirring etc. should not be resorted to.
10. In the disposal of treated effluent on land for irrigation, the industry shall keep in view of the need for;
 - Rotation of crops
 - Change of point of application of effluent on land
 - A portion of land kept fallow.
11. The adoption of these would avoid soil becoming sick or slate, the industry may ensure this in consultation with the Agriculture Department.
12. It is the sole responsibility of the industry to ensure that there are no complaints at any time from the royats in the surrounding areas as a result of discharge of sewage or trade effluent if any.
13. Proper house keeping shall be maintained by a dedicated team.
14. The industry must constitute a team of responsible and technically qualified personnel who will ensure continuous operation of all pollution control devices round the clock (including night hours) and should be in a position to explain the status of operation of the pollution control measures to the inspecting officers of the Board at any point of time. The name of these persons with their contact telephone numbers shall be intimated to the concerned. Regional Officer and Head Office of the Board and in case of any change in the team it shall be intimated to the Board immediately.

**F. SPECIAL CONDITIONS :**

- 1) Grant of consent to operate order is subject to grant of forest clearance under the Forest (Conservation) Act, 1980 from the competent authority.
- 2) Grant of consent to operate is subject to clearance under the Wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project.
- 3) A copy of the annual return (annual return submitted to IBM, Govt. of India/ Directorate of Mines, Govt. of Orissa) shall be submitted every year.
- 4) The environmental statement report shall be submitted to the Board in proper format every year.
- 5) Drills shall either be operated with dust extractors or equipped with water injection system.
- 6) Controlled blasting shall be practiced. No blasting shall be carried out after sunset.
- 7) The top soil shall be stored at earmarked site (s) only and stabilized or shall be used for land reclamation and plantation.
- 8) The over burden generated during the course of mining shall be stacked at earmarked dump site (s) and stabilized or used for reclamation of excavated land followed by plantation.
- 9) The project proponent shall ensure that no natural water course and / or water resources are obstructed due to any mining operations.
- 10) Catch dams with siltation ponds shall be constructed at appropriate places of the mine lease area to prevent run off of water and flow of sediment directly into nearby water bodies. The water so collected shall be utilized for watering the mine area, roads, green belt development etc.
- 11) Retention wall shall be constructed at the toe of topsoil dump and OB dump. Garland drain shall be constructed around topsoil dumps, over burden dump and mineral dumps terminating at settling pit to prevent run off of water and of sediments directly into nearby water bodies. Garland drain and sedimentation pit shall be desilted at regular intervals.
- 12) Regular water sprinkling shall be carried out in critical areas prone to air pollution such as around crushing and screening plant. Water sprinkling shall be carried out on haul roads at desired interval. Adequate sprinkling arrangement shall be made for control of fugitive dust emission.
- 13) Mineral handling plant (crusher, screening plant and beneficiation plant) shall be provided with adequate number of high efficiency dust extraction system or dust suppression system preferably dry fog system. Loading the unloading areas including all the transfer points shall also have efficient dust suppression arrangements. These shall be properly maintained and operated. The tailings generated from the beneficiation plant shall be disposed of in a pond of adequate size. Wastewater from beneficiation plant shall be completely reused.



- 14) The mine shall take necessary action for compliance of the following air and water quality standards. Emission and wastewater quality monitoring shall be done by the lessee twice in a week and report shall be submitted once in six months to the Board.

Industry	Parameter	Standard
Iron ore mining and ore processing	A. Emission standards for stack for De-dusting unit	
	Particulate matter	100mg/Nm ³
	Stack height **	15.0m
	** Stack height for De-dusting unit shall be calculated as $H=74 Q^{0.27}$, where H and Q are stack height in metre and particulate matter (PM) emission in tonne / hr respectively, i.e.,	
	Q (kg/hr)	H (metre)
	Up to 2.71	15
	2.72-7.86	20
	7.87-17.96	25
	17.97-35.29	30
	Note : - Stack attached to De-dusting unit shall have minimum height of 15.0 meters and would be atleast 2.50 metres above the top-most point of the nearby building / shed or plant in the mine	
	B. Fugitive Emission Standards	
	Particulate Matter	1200 µg/m ³
	Note : Fugitive emission shall be monitored in the predominant downwind direction at a distance 25.0 ± 2.0 metres from the source of fugitive emission as per following :	
	Area	Monitoring Location
	Mine face / Benches	Drilling, excavation and loading applicable for operating benches above water table
	Haul Roads/ Service Roads	Haul roads to ore processing plant, waste dumps and loading areas and service road.
	Crushing plant	Run-off mine unloading at hopper, crushing areas, screens and transfer points.
	Screening plant	Screens, conveying and transportation of ore discharge points.
	Ore storage and loading	Intermediate stock bin / pile areas, ore stock bin / pile areas, wagon / truck loading areas.
	Waste dump	Active waste / reject dumps
	C. Effluent Standards	
	pH	5.5-9.0
	Suspended solids (non-rainy day)	50 mg/l
	Suspended solids (rainy day)	100 mg/l
	Oil & Grease	10 mg/l
	Note : (i) All efforts shall be made to reuse and re-circulate the treated effluent. (ii) The aforesaid effluent standards shall be complied with for sewage, service water, beneficiation of ore wash water and surface run-off put together".	



- 15) Adequate **Ambient Air Quality Monitoring Stations** shall be established and location of the stations shall be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets in consultation with the Regional Officer, State Pollution Control Board.
- 16) **Monitoring of Ambient Air Quality** of the mine shall be done twice in a week (24 hourly) at a particular site and data shall be submitted to the State Pollution Control Board, once in six months.
- 17) It shall be ensured that the **Ambient Air Quality Parameters** conform to the norms prescribed for Industrial Area (prescribed in the consent order).
- 18) Regular monitoring of water quality of upstream and downstream of the nearby water bodies if any shall be carried out and record of monitored data shall be maintained and submitted to the State Pollution Control Board once in every year.
- 19) Appropriate mitigative measures shall be taken to prevent pollution of the nearby water bodies.
- 20) Sewage treatment plant shall be installed for the colony if any. Other domestic wastewater shall be discharged to soak pit through septic tank constructed as per BIS specification.
- 21) ETP shall also be provided for the wastewater generated during the mining operation. Oil and grease trap with sedimentation pit shall be provided for treatment of workshop effluent. The surface run off generated in the mine shall be quantified and reported to Board.
- 22) Measures shall be taken for control of noise levels below 85 dBA in the work environment.
- 23) Mine shall abide-by the Environment (Protection) Act, 1986 and rules framed thereunder.
- 24) Plantation shall be raised around the mining lease, backfilled and reclaimed area, around crusher, screen, beneficiation plant, roads etc. by planting the native species in consultation with the local DFO/ Agriculture Department.
- 25) The mine shall submit a declaration by 30th April every year that all pollution control systems are in good condition, operated and emission / air quality / ambient air quality and wastewater quality conform to the prescribed standards.



- 26) Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and other action as deemed fit.

To,

Sri Bijaya Ku. Behera, Regional Manager,
Gandhamardan Iron Ore Mines, (Block -A),
M/s. OMC Ltd., At/Po - Suakati,
Dist - Keonjhar - 758 018

SSa
6/4/11
MEMBER SECRETARY

STATE POLLUTION CONTROL BOARD, ORISSA

Memo No. _____/Dt.

Copy forwarded to :

- i) Regional Officer, State Pollution Control Board, Keonjhar
- ii) District Collector Keonjhar
- iii) D.F.O Keonjhar
- iv) District Mining Officer, Keonjhar
(For Mines and Minerals Processing Unit only)
- V) Cess Section (Head Office)
- VI) Consent Register

ENV. SCIENTIST

STATE POLLUTION CONTROL BOARD, ORISSA