

SIX MONTHLY COMPLIANCE FOR THE PERIOD APRIL 2020 TO SEPTEMBER 2020 OF ENVIRONMENT CLEARANCE ACCORDED VIDE LETTER NO J-1015/380/2006-IA.II (M) DATED 02.07.2008 IN RESPECT OF RAIKELA IRON ORE MINE OF M/S GEETARANI MOHANTY. Production of 0.864 MTPA

Specific Condition

SL NO	CONDITIONS	COMPLIANCES
i	All the conditions stipulated by the State Pollution Control Board, Orissa in their Consent to establish shall be effectively implemented.	Consent to establish from State Pollution Control Board, Odisha vide letter No. 1764/IND-NoC-3700 dated 31.01.2006 has been obtained. All condition stipulated by the state pollution control Board, Odisha is/will be effectively implemented.(Copy of the Consent to Establish letter is enclosed as Annexure-I)
(ii)	Necessary forestry clearance under the Forest (Conservation) Act, 1980 for an area of 66.671 Ha is forestland shall be obtained before starting mining operation in that area. Environmental clearance is subject to grant of Forestry Clearance.	Stage-II forest clearance for diversion of entire forest land 66.671 Ha including 2.523 Ha. of safety zone of the mining lease obtained vide letter No. 8.37/2007-FC dated 22.10.2014.(Copy of the forest clearance letter is enclosed as Annexure-II)
(iii)	The mining operations shall be restricted to 2m above the reported water table i.e. 672 mRL and it should not intersect groundwater table. In case of working below ground water table, prior approval of the Ministry of Environment and Forests and Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.	Present depth of the mining operation is at 765 m RL and the ground water level is 624 m RL. So, the present mining activity is not going to intersect the ground water table.
(iv)	The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations.	No, natural drainage system is being obstructed till now. Retaining wall, garland drain is constructed all along the OB and Sub-grade dump in order to arrest the runoff water during rain.
v)	The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for a period more than 3 years. The topsoil shall be used for land reclamation and plantation.	As the mining operation is being carried out over lateritic horizon, Top soil generation is nil.
(vi)	The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and should not be kept active for long	The mine is having Currently one waste/OB dump with 2.0 Ha areas. The ultimate area will be 3.0 Ha. Dumps are well dressed and terraced to avoid the natural collapse.

	period of time. Proper terracing of OB dump shall be carried out so that the overall slope shall not exceed 28 degree. Out of the total 21,44,567 m³ of waste to be generated during the mine life, 8,17,002 m³ shall be disposed of in the form of external dump and 13,27,565 m³ shall be backfilled in 7.0 Ha of mined out area. The backfilled area shall be afforested. The over burden dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dumps. 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 and its Regional Office located at Bhubaneswar on six monthly basis.	Plantation is done over the dead slope. The project proponent has done the exploration within the lease area. The result shows that, iron ore will not be exhausted during conceptual period. Hence, back-filling of waste is not possible during conceptual period. As per the approved Mining plan there is no proposal of back-filling during plan period.
(vii)	Catch drains and siltation ponds of appropriate size shall be constructed around the working pit(s), mineral and OB dumps to prevent runoff of water and flow of sediments directly into the Suna Nallah, Karo Nallah, Rivers and water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly de-silted particularly after monsoon and maintained properly. Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and temporary over burden dumps to prevent runoff of water and flow of sediments directly into the Suna Nallah, Karo nallah, Rivers and water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity	Catch drain and siltation pond has been constructed at strategic location to prevent runoff of water and flow of sediments directly into the Suna Nallah, Karo Nallah, Rivers and water bodies. The water so collected is being utilized for watering the mine area, roads, green belt development etc. The drains are regularly de-silted particularly after monsoon and maintained properly. View of de-silting of pond after rainy season The garland and retaining wall have been constructed around the dump and the regular

	should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and de-silted at regular intervals.	cleaning of drain and de-silting of settling pond is also carried out.
(viii)	Dimension of the retaining wall at the toe of over burden dump and over burden benches within the mine to check run-off and siltation shall be based on the rain fall data.	Dimension of protective measures constructed around the toe of the OB dump is furnished below: ❖ Length of Retaining Wall-1992m ❖ Width of retaining wall- 1.5m ❖ Height of Retaining wall-1.0m
(ix)	Plantation shall be raised in an area of 20.276 ha including a 7.5 m wide green belt in the safety zone around the mining lease, backfilled area, quarry benches, roads etc. by planting the native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per Ha.	Plantation has been carried out all along the safety zone, toe of the waste dump. There is no back-filled area available for plantation till date. The details of plantation area as follows: No of Saplings: 31850nos Area covered: 11.230Ha (over safety zone, waste dump area and along the dry nala.)
(x)	Regular water sprinkling shall be carried out in critical areas prone to Air pollution and having high levels of SPM and RPM such as around crushing and screening plant, loading and unloading point and transfer points. Extensive water sprinkling should be carried out on haul roads. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	Regular water sprinkling is being undertaken around the crushing and screening plant, loading and unloading point and Material dispatch points. Extensive water sprinkling is being carried out on haul roads. Air quality monitoring is being carried out at 8 locations (4 nos in core zone and 4 nos in buffer zone) to know the pollution level of air. The results are within permissible limit.
(xi)	Regular monitoring of water quality upstream and downstream of Suna Nallah and Karo Nalla shall be carried out and record of monitoring data should be maintained and submitted to Ministry of Environment and Forests, its Regional Office, Bhubaneswar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board	Monitoring of water quality of Karo Nallah at the upstream and downstream has been carried out and record of monitoring data has been maintained and submitted to Ministry of Environment and Forests, its Regional Office, Bhubaneswar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Copy of the Ground water clearance is attached as Annexure-III
(xii)	The project authority should implement suitable conservation measures to augment	Conservation measures to augment ground water resources in the area a detail study has

	ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	been carried out by CIMFR, Dhanbad, A reputed Institute of Govt of India. Based on the report suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board is being implemented. Roof top rain water harvesting structure has been constructed nearby the office.
(xiii)	Regular monitoring of ground water level and quality should be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out four times in a year – pre-monsoon (April-May), monsoon (August), post monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment and Forests and its Regional Office Bhubaneswar, Central Ground Water Authority and Regional Director, Central Ground Water Board.	Monitoring of the ground water quality at 3 locations namely Mines office, Tensa Tube well, & Tentulidihi dug well Village has been undertaken. The results are within permissible limit. Piezometer has already installed in the lease area of mines in 627 m RL. The depth of water level is 624 m RL.
(xiv)	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.	No objection certificate (NOC) for ground water withdrawal of 64.5cum/day has been obtained from Central Ground Water Authority, New – Delhi.
(xv)	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board.	For implementation of suitable Rain water harvesting Measures, a detail study has been undertaken by CIMFR, Dhanbad. As per the provision the suitable Rain Water Harvesting Measures along with Roof Top Rain Water Harvesting Structures is implemented.
(xvi)	Appropriate mitigative measures should be taken to prevent pollution of Karo River in consultation with the State Pollution Control Board.	Karo nala, is situated at a distance of 6.84Km in the Northern part of the lease area. However, Site specific mitigative measures to prevent polluting of the Karo Nalla, has been initiated like implementation of surface run off management guard wall across the bank of nearby Nalla.
(xvii)	Minerals handling plant shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer	The effective dry fog system with hoods over the conveyor belts got provided at crushing and screening plant, besides this fixed water sprinkling & water sprinklers with the help of

	points should also have efficient dust control arrangements. These shall be properly maintained and operated	water tankers arrangement is made to suppress the dust.
(xviii)	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded.	Regular Monitoring of emission of the vehicles is being conducted. Mineral transportation is carried out thorough covered vehicle
(xix)	Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	Blasting operation is being carried out only during the daytime. Controlled blasting is being practiced.
(xx)	Drills shall either be operated with dust extractors or equipped with water injection system	Drill machine provided with dust extractor with water injection system.
(xxi)	Consent to operate shall be obtained from the State Pollution Control Board prior to start of enhanced production from the mine.	Consent to operate Order from State Pollution Control Board, Odisha vide letter no. No 3491/IND-I-CON-2572 Dated 19.03.2020 and is valid up to 31.03.2021 for the production of 0.864 MTPA
(xxii)	Sewage treatment plant should be installed for the colony. ETP should also be Provided for workshop and wastewater generated during mining operation.	ETP has been provided for workshop. STP of 60KLD has been established for treatment of sewerage.
(xxiii)	The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna, If any spotted in the study area and contribute towards the cost of implementation of the plan and/or Regional Wildlife Management Plan for conservation of flora and fauna so prepared by the State Forest and Wildlife Department. The amount so contributed shall be included in the project cost. A copy of action plan may be submitted to the Ministry and its Regional Office, Bhubaneswar within 3 months	The Site Specific Wildlife Conservation Plan got prepared in consultation with forest department an estimated cost of Rs. 100 lakhs of which Rs. 28.00 lakh has been earmarked for implementation of Site Specific Wildlife Conservation Plan within the Mining Lease area and Rs. 72.00 Lakh has been earmarked for implementation for the purpose in the buffer zone i.e. within the zone of influence and its approved by Pr, Chief Conservator of forest and Chief Wildlife Warden Bhubaneswar vide letter no 5582-1/WL-C-SSP-212/10 dated. 07.08.2010 Precaution measures are taken for conservation during the mining operation.

(xxiv)	A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	The life of the mine is 39 years considering the reserve and production capacity @ 0.864MTPA. The project proponent is implementing the progressive mine closure plan as per the approved Mining plan vide letter No MSM/FM-10/ORI/BHU/2019-20 dated 20.09.2019. Further, a sum of Rs 1,62,69,600/- in the form of Bank guarantee has been submitted for reclamation and rehabilitation measures as a security deposit. A final mine closer plan along with detailed corpus fund will be submitted to the ministry of Environment & Forest 5 years in advance of final mine closure for approval.
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GENERAL CONDITIONS

(i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests	The Mining method of the project is/will be fully mechanized having shovels, dumper combinations and sorting and sizing of the Iron Ore.
(ii)	No change in the calendar plan including excavation, quantum of mineral iron ore and waste should be made.	There is No change in the calendar plan for excavation, quantum of mineral iron ore and waste
(iii)	Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO ₂ & NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	The monitoring of AAQ is being done in the core as well as buffer zone of the ML area. There are 4 no. of monitoring station in core zone and 4 nos in buffer zone. Core Zone Mines Site of ML area (Near Lab, weigh bridge site, Office) Buffer Zone: - Raikela Village - Bahamba Village - Tantra Village - The monitoring report reveals that the parameter like PM₁₀, PM_{2.5}, SO₂ and NO_x are as per NAAQs notifications made by the CPCB, are very well within the norms.
(iv)	Data on ambient air quality (RPM, SPM, SO ₂ &NO _x) should be regularly	The monitoring of AAQ is being carried out in the core as well as buffer zone of the

	submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.	ML area and are regularly being submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.
(v)	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Water sprinkling is being carried out regularly at dust generating points such as crushing and screening plant, loading and unloading points.
(vi)	Measures should be taken for control of noise levels below 85 d BA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.	Adequate measures were being taken for control of noise level below 85 d BA in the work environment. Workers engaged in drilling and blasting operations, operations of HEMM, etc. has been provided with ear plugs / muffs.
(vii)	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	ETP has been constructed nearby the workshop.
(viii)	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Initial Medical Examination & Periodical Medical Examination of the workers engaged in the project is being undertaken periodically for permanent and outsider employees through EZMA.
(ix)	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	An Environment Cell is being established under Corporate Environment Policy with suitable qualified personnel under the control of a Senior Executive, who is reporting directly to the Head of the Organization
(x)	The funds earmarked for environmental protection measures should be kept in separate account and should not be	The funds earmarked for environmental protection is being utilized for the Environment protection measures.

	diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Bhubaneswar.	Year wise expenditure is being reported to the Ministry and its Regional Office located at Bhubaneswar.
(xi)	The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	This will be communicated in due course to the concerned authority.
(xii)	The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	We will extend all our cooperation during any such inspections by the Authority.
(xiii)	The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Bhubaneswar, Central Pollution Control Board and State Pollution Control Board.	The Project is uploading the last six monthly EC Compliance reports in the website bearing address <u>www.grmmine.in</u> on regular basis.
(xiv)	A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.	It has been complied with intimating the letters to local Gram Panchayat, Municipality, DDM Office, Zila Parishad, Divisional Forest Officer etc. and a copy of environmental clearance letter also made available in the company's website i.e. <u>www.grmmine.in</u> .
(xv)	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office / Tehsildar's Office for 30 days.	It is being already complied.
(xvi)	The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance	Paper advertisement has been published in Oriya news paper "The Khabara" on dated 09.07.2008 and English news paper "The Indian Express" on dated 12.07.2008. Copy of the same is already submitted.

	letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at <u>http://envfor.nic.in</u> and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubaneswar.	
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**OFFICE OF THE
STATE POLLUTION CONTROL BOARD, ORISSA**

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

No. 1784 /Ind-II-NOC- 3760

Date 31-7-06

OFFICE MEMORANDUM

In consideration of the application for obtaining Consent to Establish for **M/s Geeta Rani Mohanty. for Raikela Iron Ore Mine** 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 to 72000 MT/ Month , 100 and 50 Tons per hour Crushing and Screening Plant, 200 and 100TPH ROM Screening plant of Raikela Iron Ore Mine in the ML Area over 64.068 Ha, in Raikela PO-Dngula of Sundergarh District Orissa** with the following conditions.

GENERAL CONDITIONS.

1. This Consent to establish is valid for the product, quantity manufacturing process and raw materials as mentioned in the application & 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 or 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 granted subject to other clearances from Govt. of Orissa and/or Govt. of India, as and when applicable.**

SPECIAL CONDITIONS : -

1. This Consent to Establish is granted subject to Environmental clearance from Ministry of Environment & Forest, Govt. of India, New Delhi.
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 year of operation as stipulated. 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 desilted 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 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.

Contd....Pg/3

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.
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 S.S = 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 practiced.
15. Four 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 the Air (Prevention & Control of Pollution) Act, 1981m the 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 months from the date of issue of this order.
25. This Consent to Establish is granted subject to grant of Explosive License and forest clearance from Competent Authority. The valid Explosive License and forest clearance must be submitted to this Board while applying for Consent to operate to this Board.
26. This Consent to Establish is granted subject to implementation of all recommendation made during public hearing held on 20-10-2005.
27. 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 and/or any information suppressed in the application form.
28. The mine shall abide by all the provisions of Environment (Protection) Act, 1986 and rules framed thereunder.


27/01/06
MEMBER SECRETARY

To,

Mr. Srinibash Sahoo
M/s Raikela Iron Ore Mines.
Station Road, AT/PO- Barbil, Dist- Keonjhar

Memo No. _____/Dt.

Copy forwarded to :

1. District Collector, **Sundergarh**
2. Dy Director Mines, Koira **Sundergarh**
3. Consent Section , **Env. Engineer – II**
4. Director, Factories & Boiler, **Bhubaneswar**
5. Copy to Guard file/Consent to establish register
6. Regional Officer, O.S.P.C.Board, **Rourkela**


SR. ENV. ENGINEER

F. No. 8-37/2007-FC
Government of India
Ministry of Environment, Forests and Climate Change
(Forest Conservation Division)

Indira Paryavaran Bhawan
Aliganj, Jorbagh Road
New Delhi -110 003
Dated: 22nd October, 2014

To,

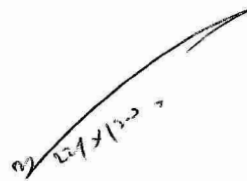
The Principal Secretary (Forests)
Government of Odisha
Bhubaneswar.

Sub: Diversion of 64.148 hecatres of forest land for Iron Ore Mining in Village Raikela by Geetarani Mohanty of Bonai Forest Division in the district of Sundargarh, Odisha.

Sir,

I am directed to refer to the Government of Odisha's letter No 10F (Cons) 38/ 2013-7190/ F & E dated 22nd April 2014 on the above-mentioned subject, wherein prior approval of the Central Government for diversion of (i) 64.148 hecatres of forest land for Iron Ore Mining in village Raikela by M/s. Geetarani Mohanty of Bonai Forest Division in the district of Sundargarh, Odisha during the original Mining lease period which has already expired on 1.7.2011 and (ii) the entire forest land of 66.671 hectares including 2.523 hectares of forest land within the safety zone within the ML area of 67.586 hecatres during 1st RML for a period, co-terminus with lease period to be granted by the State Government, not exceeding twenty years *w.e.f.* 02.07.2011, was sought, in accordance with section-2 of the Forest (Conservation) Act, 1980. After careful consideration of the proposal by the Forest Advisory Committee constituted by the Central Government under section 3 of the said Act, in-principle approval for the said diversion was granted vide this Ministry's letter of even number dated 29th August 2014, subject to fulfillment of certain conditions. The State Government has furnished compliance report in respect of the conditions stipulated in the in-principle approval and has requested the Central Government to grant final approval.

2. In this connection, I am directed to say that on the basis of the compliance report furnished by the Government of Odisha vide letter No. 10F (Cons) -38/2013-18032/ F & E dated 29th September 2014, approval of the Central Government is hereby granted under section 2 of the Forest (Conservation) Act, 1980 for diversion of (i) 64.148 hecatres of forest land for Iron Ore Mining in village Raikela by M/s. Geetarani Mohanty of Bonai Forest Division in the district of Sundargarh, Odisha during the original Mining lease period which has already expired on 1.7.2011 and (ii) for entire forest land of 66.671 hectares including 2.523 hectares of forest land within the safety zone within the ML area of 67.586 hecatres during 1st RML for a period, co-terminus with lease period to be granted by the State Government, not exceeding twenty years *w.e.f.* 02.07.2011, subject to fulfillment of the following conditions:


22/10/2014

- (i) Legal status of the diverted forest land shall remain unchanged;
- (ii) State Government shall create and maintain from funds already realised the user agency, compensatory afforestation over non-forest land equal in extent to 64.148 hectares of forest land diverted in favour of the user agency for mining and allied activities, transferred and mutated in favour of the State Forest Department;
- (iii) State Government shall undertake, from funds already realised from the user agency, fencing, protection and regeneration of the safety zone area (7.5 metre strip all along the outer boundary of the mining lease area). Besides this, State Government shall also undertake, from funds already realised from the user agency, afforestation on degraded forest land, to be selected elsewhere, measuring one and a half times the area under safety zone;
- (iv) User agency shall undertake appropriate measures as per the plan duly approved by the Divisional Forest Officer, Bonai Forest Division to prevent pollution of tanks, rivers and *nalas*, etc. and de-silting of adjoining villages located within 5 kilometers from the project site;
- (v) Following activities shall be undertaken by the State Forest Department from funds already realised from the user agency as per the Plan duly approved by the Regional Chief Conservator of Forests, Rourkela:
 - (a) Proper mitigative measures to minimize soil erosion and choking of stream;
 - (b) Planting of adequate drought hardy plant species and sowing of seeds to arrest soil erosion; and
 - (c) Construction of check dams, retention/toe walls to arrest sliding down of the excavated material along the contour.
- (vi) Wherever possible and technically feasible, the user agency shall undertake by involving local community, afforestation measures, as per the plan duly approved by the DFO, Bonai Forest Division, in the blanks within the lease area, as well as along the roads outside the lease area diverted under this approval;
- (vii) The State Government shall realise from the user agency additional NPV, if so determined as per the final decision of Hon'ble Supreme Court of India and transfer the same to the Ad-hoc CAMPA;
- (viii) State Government shall create and maintain from funds already realised from the user agency, penal compensatory afforestation over degraded forest land equal in extent to the 43.056 hectares of DLC forest land utilised for mining and allied activities without obtaining requisite approval under the Forest (Conservation) Act, 1980;



- (ix) The lease will remain in the name of M/s Geeta Rani Mohanty. For transfer of the said lease to any other firm or person prior approval of Central Government under the Forest (Conservation) Act, 1980 shall be obtained;
- (x) User agency shall surrender from the mining lease, as per the schedule submitted to this Ministry, the fully (biologically) reclaimed mined out forest land. The summary of the said schedule is as below:

(in hectares)

Phase/ Financial year	Mined out area at the beginning	Addl. Area	Total Area	Area to be reclaimed and rehabilitated	Year of reclamation	Mined out land at the end of the phase	Schedule of surrender
1 st Phase 2011- 2016	29.893	7.00	36.893	Nil	---	36.893	---
2 nd Phase 2016- 2021	36.893	3.00	39.993	Nil	---	39.993	---
3 rd Phase 2021- 2026	39.993	3.00	42.893	10.000	0 th Year	32.893	10 th Year 2031-2036
4 th Phase 2026- 2031	32.893	3.00	35.893	10.000	5 th Year	25.893	10 th Year 2036-2041
5 th Phase 2031- 2036	25.893	3.00	28.893	10.000	10 th Year	18.893	10 th Year 2041-2046
6 th Phase 2036-2041	18.893	2.00	20.893	10.000	15 th Year	10.893	10 th Year 2046-2051
7 th Phase 2041- 2046	10.893	Nil	10.983	10.893	20 th Year	Nil	10 th Year 2051-2056

- (xi) Any other condition that the concerned Regional Office of this Ministry of the State Forest Department may impose from time to time for protection and improvement of flora and fauna in the forest area;

2017/10/10

- (xii) User agency shall submit annual report on compliance to conditions stipulated in this approval to the State Forest Department and the concerned Regional office of this Ministry; and
- (xiii) User agency and the State Government shall comply with all other conditions, as applicable to this project, under different rules, regulations and regulations including environmental clearance.

Yours faithfully,


(H. C. Chaudhary)
Director

Copy to:

1. The Principal Chief Conservator of Forests, Government of Odisha, Bhubaneswar.
2. The Nodal Officer, the Forest (Conservation) Act, 1980, O/o the Principal Chief Conservator of Forests, Government of Odisha, Bhubaneswar.
3. The Addl. Principal Chief Conservator of Forests (Central), Regional Office (Eastern Zone), Bhubaneswar.
4. User agency.
5. Monitoring Cell, FC Division, MoEF, New Delhi.
6. Guard File.


(H. C. Chaudhary)
Director

No. 21-485/SER/CGWA/2008- 17 2 3
Government of India
Ministry of Water Resources
Central Ground Water Authority
A 2, W 3, Curzon Road Barracks
Kasturba Gandhi Marg
New Delhi 110001

To,
M/s Geetarani Mohanty
Raikela Iron-Ore Mines
Station Road, P.O. Barbil
District Keonjhar-758035, Orissa

Dated: 18 DEC 2008

Sub: No Objection for withdrawal of ground water by Raikela Iron-Ore Mines of M/s Geetarani Mohanty located at Village Raikela, Block Koira, Taluka Bonai, District Sundargarh, Orissa -reg.

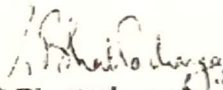
Sir,

Kindly refer to your application dated 16.10.2008 on the above-cited subject. As the above mentioned site falls in 'Safe Category' area on ground water resource considerations, Central Ground Water Authority has no objection for the proposed withdrawal of 64.5 m³/day of ground water in respect of Raikela Iron-Ore Mines of M/s Geetarani Mohanty located at Village Raikela, Block Koira, Taluka Bonai, District Sundargarh, Orissa.

However, taking into consideration the adverse effect of the ground water withdrawal that may arise on long term basis, the firm/ industry is advised to implement Rain Water Harvesting and Conservation measures, Recycling and Re-use of water and Monitoring of the ground water levels in and around the area as per the hydrogeological investigation. The data may be submitted to this office for perusal.

The NOC is valid till the area remains under Safe Category on ground water resource consideration, or, for a period of five years from the date of issue of this letter, whichever is earlier.

Yours faithfully,


(S Bhattacharya)
Scientist 'D'
for Member Secretary

Copy for information to:

- 1) The Regional Director, CGWB, SER, Bhubaneswar.
- 2) The TS to Chairman, CGWB, NH -IV, Faridabad.

(S Bhattacharya)
Scientist 'D'
for Member Secretary



CONSENT ORDER
RAIKELA IRON ORE MINES OF M/S. GEETARANI MOHANTY.

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BY REGD. POST WITH AD

STATE POLLUTION CONTROL BOARD, ODISHA

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

Phone-2561909, Fax: 2562822, 2560955 E-mail: paribesh1@ospcboard.org, Website: www.ospcboard.org

CONSENT ORDER

No. 11687 / IND-I-CON- 2572

Dt. 01.07.15

CONSENT ORDER NO. 1586

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 online application No. 193961, DATED 31.03.2015

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: RAIKELA IRON ORE MINES OF M/S. GEETARANI MOHANTY.

Name of the Occupier & Designation: SRINIBASH SAHOO, MANAGING PARTNER

Address : AT: RAIKELA, PO: DENGULA, DIST: SUNDARGARH.

This consent order is valid for the period up to 31.03.2016

Details of Products Manufactured

Sl. No	Product	Quantity
01.	Iron Ore	0.864 MTPA

Details of Mineral Handling Plants /Units

01	Operation of Iron ore crushing plant 1x50 TPH & 1x100 TPH
02.	Operation of Iron ore screening plant 1x100 TPH & 1x200 TPH

This consent order is valid for the 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. Discharge permitted through the following outlet subject to the standard

Out let No.	Description of outlet	Point of discharge	Quantity of discharge KLD or KL/hr	Pre-scribed Standard			
				pH	TSS (mg/l)	BOD (mg/l)	Oil & Grease (mg/l)
01	Septic tank outlet (Domestic effluent)	Soak pit	20 KLD	5.5-9.0	200	100	---
02	Mine drainage water/ surface runoff/ other wastewater	On land/ Inland surface water	220 KLD	5.5-9.0	100 (Rainy day)	-	10
					50 (Non-Rainy day)		

B. 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 (mg/Nm ³)	SO ₂	NO _x	
					--	--	

C. 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/ over burden	As per approved mining plan	--	--	--	As per approved mining plan



CONSENT ORDER
RAIKELA IRON ORE MINES OF M/S. GEETARANI MOHANTY.

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D. 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/stacks 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.
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.



CONSENT ORDER
RAIKELA IRON ORE MINES OF M/S. GEETARANI MOHANTY.

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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 (Prevention 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 discharge 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 pollutants and / or result in violation of the standards mentioned above shall be reported to the Headquarters and Regional Office of the Board by fax / 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 fugitive 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 this 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 (Prevention & 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.
4. The applicant shall forward the following information to the Member Secretary, State Pollution Control Board, Odisha, 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.



CONSENT ORDER
RAIKELA IRON ORE MINES OF M/S. GEETARANI MOHANTY.

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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
 - i) A description of the non-compliance discharge including its impact on the receiving waters.
 - ii) 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.
 - iii) Steps taken by the applicant to reduce and eliminate the non-complying discharge and
 - iv) 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 alkalies 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 housekeeping 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.
-



E. SPECIAL CONDITIONS :

- 1) This consent order is subject to outcome/final order of pending case (writ petition (Civil) No. 114/2014) in Hon'ble Supreme Court.
 - 2) This consent order is subject to permission from Steel and Mines Department, Government of Odisha for resumption of mining operation.
 - 3) A copy of the annual return (annual return submitted to IBM, Govt. of India/ Directorate of Mines, Govt. of Odisha) 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 to minimize dust generation in the work environment.
 - 6) Controlled blasting shall be practiced to minimize generation of dust and fly rocks. No blasting shall be carried out after the sunset.
 - 7) The top soil shall be stored at earmarked site (s) only and stabilized or shall be used for land reclamation.
 - 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 watercourse and / or water resources are obstructed due to any mining operations.
 - 10) Check dams and check weirs shall be constructed at appropriate places of the mine lease area to prevent direct flow of sediment into nearby water bodies. The surface runoff water shall meet the prescribed standards before disposal to outside.
-



- 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 dumps and mineral stack yards terminating at settling pit to prevent runoff of water and flow of sediments directly into nearby water bodies. Garland drain and sedimentation pit shall be desilted after monsoon or as and when required. The discharge quality shall meet the standards prescribed.
 - 12) 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.
 - 13) Sewage treatment plant shall be installed for the domestic wastewater of the colony, if any and other areas or shall be discharged to soak pit through septic tank constructed as per BIS specification.
 - 14) ETP shall also be provided for workshop and wastewater generated during mining operation, if any.
 - 15) Regular water sprinkling shall be carried out in areas where the fugitive dust is generated. Water sprinkling shall be carried out on haul roads at desired interval. Haulage roads shall be devoid of ruts and potholes and shall be maintained properly to avoid generation of dust during movement of vehicles.
 - 16) Dust suppression measures preferably dry fog system shall be provided at the potential dust generation sources of mineral handling plants (crusher & screening plant). Loading and unloading areas including all the transfer points shall also have efficient dust suppression arrangements (dry fog system). These shall be properly maintained and operated.
-



- 17) The mine shall take necessary action for compliance of the following air and water quality standards.

Parameter	Standard for iron ore mines
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".	



- 18) Four Ambient Air Quality Monitoring Stations shall be established in core zone and buffer zone for monitoring of ambient air quality 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.
 - 19) Monitoring of Ambient Air Quality and fugitive dust emission 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.
 - 20) It shall be ensured that the Ambient Air Quality Parameters conform to the norms prescribed in the consent order.
 - 21) Measures shall be taken for control of noise levels below 85 dBA in the work environment.
 - 22) Ambient air quality monitoring data, noise monitoring data and water / wastewater quality monitoring data shall be electronically displayed at the entry point of the mine or at a suitable location of the mine.
 - 23) Plantation of trees shall be undertaken in the colony/ township, over top soil dumps, OB dumps, back filled areas, along the side of haul road and in other areas of the mines not being utilized for mining activities. The mine shall take up avenue plantation and plantation in nearby village areas in consultation with DFO/Horticulture Department. The density of the plantation shall be around 2500 plants per hectare. Nursery shall also be developed for plantation activities within the ML area and free distribution of seedlings to nearby villagers. The annual statements pertaining to the number of trees planted areas where plantation has been done, survival percentage and area in Ha. covered under plantation shall be submitted to the Board, every year in prescribed format.
-



CONSENT ORDER
RAIKELA IRON ORE MINES OF M/S. GEETARANI MOHANTY.

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- 24) Mining operation is subject to availability of all other statutory clearances required under relevant Acts/Rules.
- 25) The mine shall submit a declaration by 30th of April every year that all pollution control systems are in good condition, operated and ambient air quality as well as wastewater quality conforms to the prescribed standards.

MEMBER SECRETARY
STATE POLLUTION CONTROL BOARD, ODISHA

To,

The Managing Partner,
M/s. Geetarani Mohanty,
Raikela Iron Ore Mines,
Plot No.380, Bomikhal (Near Durga Mandap)
Bhubaneswar-751010

Memo No. _____ /Dt.

Copy forwarded to :

- i) Regional Officer, State Pollution Control Board, Rourkela.
- ii) District Collector, Sundargarh
- iii) Director of Mines, Govt. of Odisha, Bhubaneswar
- iv) Director, Environment -cum-Special Secretary, F & E. Deptt. Govt. of Odisha, Bhubaneswar.
- v) D.F.O, Bonai, Sundargarh
- vi) Deputy Director of Mines, Koira, Sundargarh.
- vii) Cess Section (Head Office)
- viii) Sr. Env. Engineer-L-I (C) (Hazardous waste cell)
- ix) Consent Register

SR. ENV. SCIENTIST (MINES)
STATE POLLUTION CONTROL BOARD, ODISHA



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**GENERAL STANDARDS FOR DISCHARGE OF
ENVIRONMENTAL POLLUTANTS**



**GENERAL STANDARDS FOR DISCHARGE OF
ENVIRONMENTAL POLLUTANTS PART –A : EFFLUENTS**

Sl.No.	Parameters	Standards			
		Inland surface	Public sewers	Land for irrigation	Marine Costal Areas
		(a)	(b)	(c)	(d)
1.	Colour & odour	Colourless/Odourless as far as practicable	-----	See 6 of Annex-1	See 6 of Annex-1
2.	Suspended Solids (mg/l)	100	600	200	For process wastewater – 100 b. For cooling water effluent 10% above total suspended matter of influent.
3.	Particular size of SS	Shall pass 850	-----	-----	
5.	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
6.	Temperature	Shall not exceed 5°C above the receiving water temperature	-----	-----	Shall not exceed 5°C above the receiving water temperature
7.	Oil & Grease mg/l max.	10	20	10	20
8.	Total residual chlorine	1.0	----	-----	1.0
9.	Ammonical nitrogen (as N) mg/l max.	50	50	-----	50
10.	Total Kjeldahl nitrogen (as NH ₃) mg/1 max.	100	----	-----	100
11.	Free ammonia (as NH ₃) mg/1 max.	5.0	----	-----	5.0
12.	Biochemical Oxygen Demand (5 days at (20°C) mg/1 max.	30	350	100	100
13.	Chemical Oxygen Demand, mg/1 max.	250	----	-----	250
14.	Arsenic (as As) mg/1 max.	0.2	0.2	0.2	0.2
15.	Mercury (as Hg) mg/1 max.	0.01	0.01	-----	0.001
16.	Lead (as pb) mg/1 max.	01.	1.0	-----	2.0



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17.	Cadmium (as Cd) mg/l max.	2.0	1.0	-----	2.0
18.	Hexavalent Chromium (as Cr + 6) mg/l max.	0.1	2.0	-----	1.0
19.	Total Chromium (as Cr) mg/l max.	2.0	2.0	-----	2.0
20.	Copper (as Cu) mg/l max.	3.0	3.0	-----	3.0
21.	Zinc (as Zn) mg/l max.	5.0	15	-----	15
22.	Selenium (as Se) mg/l max.	0.05	0.05	-----	0.05
23.	Nickel (as Ni) mg/l max.	3.0	3.0	-----	5.0
24.	Cyanide (as CN) mg/l max.	0.2	2.0	0.2	0.02
25.	Fluoride (as F) mg/l max.	2.0	15	-----	15
26.	Dissolved Phosphates (as P) mg/l max.	5.0	-----	-----	-----
27.	Sulphide (as S) mg/l max.	2.0	-----	-----	5.0
28.	Phenolic compounds as (C ₆ H ₅ OH) mg/l max.	1.0	5.0	-----	5.0
29.	Radioactive materials a. Alpha emitter micro curie/ml. b. Beta emitter micro curie/ml.	10 ⁷ 10 ⁶	10 ⁷ 10 ⁶	10 ⁸ 10 ⁷	10 ⁷ 10 ⁶
30.	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
31.	Manganese (as Mn)	2 mg/l	2 mg/l	-----	2 mg/l
32.	Iron (Fe)	3 mg/l	3 mg/l	-----	3 mg/l
33.	Vanadium (as V)	0.2 mg/l	0.2 mg/l	-----	0.2 mg/l
34.	Nitrate Nitrogen	10 mg/l	-----	-----	20 mg/l



NATIONAL AMBIENT AIR QUALITY STANDARDS

Sl. No.	Pollutants	Time Weighed Average	Concentrate of Ambient Air		
			Industrial Residential, Rural and other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1.	Sulphur Dioxide (SO ₂), µg/m ³	Annual * 24 Hours **	50 80	20 80	-Improved west and Gaeke - Ultraviolet fluorescence
2.	Nitrogen Dioxide (NO ₂), µg/m ³	Annual * 24 Hours **	40 80	30 80	- Modified Jacob & Hochheiser (Na-Arsenite) - Chemiluminescence
3.	Particulate Matter (size less than 10µm) or PM ₁₀ µg/m ³	Annual * 24 Hours **	60 100	60 100	-Gravimetric - TOEM - Beta Attenuation
4.	Particulate Matter (size less than 2.5µm) or PM _{2.5} µg/m ³	Annual * 24 Hours **	40 60	40 60	-Gravimetric - TOEM - Beta Attenuation
5.	Ozone (O ₃) µg/m ³	8 Hours ** 1 Hours **	100 180	100 180	- UV Photometric - Chemiluminescence - Chemical Method
6.	Lead (Pb) µg/m ³	Annual * 24 Hours **	0.50 1.0	0.50 1.0	-AAS/ICP method after sampling on EMP 2000 or equivalent filter paper. - ED-XRF using Teflon filter
7.	Carbon Monoxide (CO) mg/m ³	8 Hours ** 1 Hours **	02 04	02 04	- Non Dispersive Infra Red (NDIR) Spectroscopy
8.	Ammonia (NH ₃) µg/m ³	Annual* 24 Hours**	100 400	100 400	-Chemiluminescence - Indophenol Blue Method
9.	Benzene (C ₆ H ₆) µg/m ³	Annul *	05	05	-Gas Chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10.	Benzo (a) Pyrene (BaP)-Particulate phase only, ng/m ³	Annual*	01	01	-Solvent extraction followed by HPLC/GC analysis
11.	Arsenic (As), ng/m ³	Annual*	06	06	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12.	Nickel (Ni), ng/m ³	Annual*	20	20	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year, 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.