

Ref No.GMS/POEF&CC/ 03 /2018

Date: 14.12.2018

To

The Additional Principal Chief Conservator of Forests (c),
Ministry of Environment, Forests & Climate Change,
Regional Office (Eastern Zone),
Chandrasekharapur,
Bhubaneswar

Sub: Submission of half yearly compliance report in respect of Gorumahisani Iron Ore Mines over 349.50 Ha located in villages Badmouda, Sanmouda, Balitangri, Kuleisila and Gorumahisani R.F. etc of M/s Ghanashyam Misra & Sons (P) Ltd, in Mayurbhanj district for the period April-2018 to September-2018.

Ref: ORDER NO. J-11015/426/2006-I A.II (M) DATED 29.01.2008

Respected Sir,

We are enclosing herewith compliance report of the conditions stipulated in the Environmental clearance order granted by the MoEF&CC, Government of India vide order No. J-11015/426/2006-I A.II (M) dated 29.01.2008, for the period April-2018 to September-2018, in respect of Gorumahisani Iron Ore Mines over 349.50 Ha located in villages Badmouda, Sanmouda, Balitangri, Sundhal, Kuleisila and Gorumahisani Reserve Forest etc for Iron Ore.

This is for favor of kind information.

Thanking you,

yours faithfully,
For Ghanashyam Misra & Sons (P) Ltd


Manager,
Gorumahisani Iron Ore Mine

Encl: As above



HALF YEARLY COMPLIANCE REPORT

OF

CONDITIONS IMPOSED BY THE MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE IN THE ENVIRONMENTAL CLEARANCE ORDER GRANTED VIDE ORDER NO. J-11015/426/2006-I A.II (M) DATED 29.01.2008.

IN RESPECT OF

GORUMAHISANI IRON ORE MINE OVER 349.50 HA



FOR THE PERIOD

APRIL-2018 TO SEPTEMBER-2018

SUBMITTED FOR & ON BEHALF OF

**M/S GHANASHYAM MISRA & SONS (P) LTD
GORUMAHISANI, MAYURBHANJ**

PROJECT DESCRIPTION

Introduction

M/s Ghanashyam Misra and Sons (P) Ltd, Lessee/Project Proponent of Gorumahisani Iron Ore Mines having its registered office at, 7, Waterloo Street, 2nd Floor, Kolkata, West Bengal – 700069, has been registered under Companies Act and the mine registration no. of IBM is IBM/1235/2011. Its mine code is 30/OR-110005.

The lease was executed for the first term on 07.01.1970 in favour of Ghanashyam Misra for 30 years over an area of 1435.30 hectares. Subsequently, the lease was transferred to a private limited company on 14.10.1980 with approval of Government of Odisha, in the name & style of M/s Ghanashyam Misra & Sons Pvt. Ltd (GMSPL). The period of the lease expired on 6th January, 2000. Application for renewal of the mining lease was filed over a reduced area of 820.98 hectares on 26.11.1998 under provisions of MCR, 1960. Further the area was reduced from 820.98 hectare to 349.50 hectare after obtaining all statutory clearances. Accordingly revised RML application over 349.50 hectares was submitted to the State Government on dt.17.04.2006.

As per provisions of the MMDR Amendment Act 2015, Govt. of Odisha, through Steel & Mines Department, vide letter No 2297/SM/III-A(SM)-06/2014 dated 16.03.17, has extended the period of lease till dt.31.03.2020 and also accepted the part surrendered of the lease to tune of 1085.80 Ha w.e.f. the date of expiry of the original lease period i.e. from 06.01.2000.

Supplementary lease deed over 349.50 Ha for the extended period was executed on 14.06.2020 with validity up to 31.03.2020.

Location of the Project

The mine falls in the survey of India Toposheet No 73 J/7. The lease area is 349.50 Ha including forest land of 90.50 Ha (81.00 Ha diverted for mining purposes + 9.50 Ha Safety Zone). The longitude is $86^{\circ} 14' 40.74521''$ to $86^{\circ} 17' 21.67649''$ (E) and latitude is $22^{\circ} 18' 12.05986''$ to $22^{\circ} 20' 28''$ (N). The nearest railway station is Gorumahisani of S.E Railway. The area is approachable from Rairangpur, which is at a distance of 16 km from the mine. District Headquarter Baripada is at a distance of 100 km from the mine. The mine is located in the village Kuleisila, Badamounda, Sanamounda, Sundhal, Balitangi, Nodhabani and Gorumahisani R.F.

Project Details

The nature of the project is to enhance Iron ore production capacity from 0.75 MTPA to 1.1 MTPA within the same lease area. As per the Environmental Impact Assessment (EIA) Notification dated 14th September 2006, the proposed capacity expansion project falls under 'Category-A' of project type 1(a) and requires Environmental Clearance (EC) to be obtained from MoEF&CC, Govt. of India.

Salient features of the Project

The salient features of Gorumahisani Iron Ore Mines are detailed below:

SL.NO.	Description	Particulars
1	Mine lease area	349.50 Ha
2	Types of Land	Forest – 90.50 ha. (Diverted Mining area – 81.00 ha + safety zone area - 9.50 ha.) Non Forest – 259.00 ha.
3	Validity of Lease	Up to 31.03.2020
4	Mine Plan/Scheme Period	Review of modification of Mining Plan along with Progressive Mine Closure Plan has been duly approved by Indian Bureau of Mines vide letter No. MPM/OTFM/09-ORI/BHU/2018-19 dated 04.07.2018 for expansion of Iron Ore

		Production from 0.75 MTPA to 1.1 MTPA
5	Area Under Mining	63.00 Ha (present)
	Area during review period	12.557 Ha
	Total Area	75.775 Ha
	Total Area at Conceptual period	92.10 Ha
6	Type of mine	Opencast mine
7	Method of mining	Semi-mechanized opencast method (OTFM)
8	Rated capacity	0.75 to 1.1 MTPA
9	Expected life of mine as on 01.04.2018	12 years
10	Ore to Waste ratio	1.041
11	Geological reserve	18.007 MT (as on 01.04.2018)
12	Mineable reserves	13.26MT(as on 01.04.2018)
13	Balance life	2 yrs.(2018-19 & 2019-20)
14	Average no. of working days	300 days
15	Number of shifts	1 (General shift)
16	Working hours	8 hrs
17	Bench height	6 m to 9m
	Bench width	6 m to10 m
18	Maximum Working Depth	896MRL (East block)
	Minimum Working Depth	318 MRL (West Block)

Process Description

Drilling, Blasting, loading, sizing, transportation are various mining operations which are being carried out at present. As per MCDR, 1988 the mine is being operated as Category-A (OTFM) mine.

Due to nature of strata, rock breakers are deployed for loosening of the working faces. Drilling & blasting are practiced occasionally for losing the hard strata. Power

gel explosive in conjunction with safety fuse and detonators are used for blasting to loosen hard rock mass for ease in excavation. Wagon drill 100 mm dia is used.

Loosened ROM ore is excavated and loaded by the excavators into the 10t and 20t capacity dumpers which carry the ROM ore for feeding of crusher / screens. Excavators of 0.9 to 1.8 m³ capacity are used for excavation & loading of ore as well as waste materials.

Two numbers of screening units (200 TPH) have been deployed for sizing of ROM ore in to the lumps of +40 mm, 10-40 mm and sub grade ore.

Status of various Clearances of the Project:

The project has accorded statutory clearance/orders from various Departments of Govt. of India as Govt. of Odisha as mentioned below:

Forest Clearance: The MoEF&CC, Govt. of India has accorded State-II approval over 81.00 Ha leaving 9.50 Ha as safety zone vide letter No. F. No. 8-41/2003 FC dated 13 September 2006.

Environmental Clearance: The MoEF&CC, Govt. of India has accorded environmental clearance for production of 0.75 MTPA of iron ore from the mine over 349.50 Ha vide letter No. J-11015/426/2006-I A.II (M) dated 29.01.2008. Letter dated 29.01.2008 is enclosed herewith and marked as Annexure-D.

Consent to Establish: The State Pollution Control Board, Odisha has granted Consent to Establish order for production of 0.75 MTPA of Iron ore vide letter No. 1627-IND-II-NOC-4413 dated 27.01.2007.

Consent to Operate: Consent to operate granted by State Pollution Control Board, Odisha vide order No. 4848/IND-I-CON-250 dated 19.3.2016 with validity up to 31.03.2020.

Approval of Mining Plan/Scheme: Review of Modification of Mining Plan along with Progressive Mine Closure Plan duly approved by the Indian Bureau of Mines, Bhubaneswar Region vide letter No. MPM/OTFM/ 09-ORI/ BHU/2018-19 dated 04.07.2018 for expansion of Iron Ore Production from 0.75 MTPA to 1.1 MTPA for the period 2018-19 and 2019-20.

Wild life conservation plan: Approved vide letter No. 4465/1WL(C) (FC) 308/08, dated 19.07.2008 & Rs. 65 lakhs has been deposited against approved plan.

Ground water permission: The Mine has obtained permission for withdrawal ground water 80m³ per day from Central Ground Water Authority vide Letter No.21-4(81)/SER/CGWA/2008-1725 dated 18.12.2008. RWSS (Rural Water Supply System) has agreed to provide 80000 Liters/Day vide letter No-135 dated 28-06-2006.

COMPLIANCE TO THE SPECIFIC CONDITIONS IMPOSED BY THE MINISTRY IN THE ENVIRONMENTAL CLEARANCE ORDER DATED 29.01.2008 FOR PRODUCTION OF 0.75 MTPA OF IRON ORE FROM GORUMAHISANI IRON ORE MINE LEASE AREA OVER 349.50 HA

SL.NO.	CONDITION	COMPLIANCE
(i)	Necessary forestry clearance under the Forest (Conservation) act, 1980 shall be obtained from the competent authority for the forestland involved in the project. The environment clearance is subject to grant of forestry clearance to the project.	The mine has accorded forest clearance for the diverted forest land measuring 81.00 Ha from the Ministry of Environment & Forests, Government of India, New Delhi vide letter No. F. No. 8-41/2003 FC dated 13 th September 2006 for additional area 81.00 Ha (leaving 9.50 Ha as safety zone) under Forest Conservation Act, 1980.
(ii)	All the conditions stipulated by the State Pollution Control Board, Orissa while granting Consent to Establish to the project shall be effectively implemented.	The condition stipulated by the State Pollution Control Board, Orissa in the Consent to Establish (CTE) order vide letter No. 1627-IND-II-NOC-4413 dated 27.01.2007 are Being followed.
(iii)	The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case working below ground water table, prior approval of the Ministry of Environment & Forests and Central Ground water Authority shall be obtained for which a detailed hydro-geological study shall be carried out.	<p>Mining operation is not intersecting the ground water as the Ground water being at lower level in comparison to existing maximum quarry depth. The lowest working depth of mine pits is at 563 m RL, in east block, where as the presence of ground water table has been estimated to be at 342 m RL and maximum quarry depth in west block is 318 mRL, where ground water table has been estimated to be at 295m RL.</p> <p>However, for withdrawing ground water for mining and allied activities a hydro geological studies around 10 k.m. radius of the M.L. area is duly approved and also obtained no objection order for withdrawing ground water issued by the Government of India, Ministry of Water Resources, Central Ground Water Authority</p>
(iv)	The project proponent shall ensure that no natural watercourse and / or water resources shall be obstructed due to any mining operations	It is ensured that no natural watercourse and / or water resource is obstructed due to any mining operation since there has been no natural stream flowing through the mining lease.

SPECIFIC CONDITIONS:

SL.NO.	CONDITION	COMPLIANCE
		<p>However, Site specific mitigation measures to prevent pollution of nearby natural water bodies, has been initiated like implementation of surface runoff management and guard wall across the bank of nearby the seasonal nalla.</p>
(v)	<p>The top soil shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for a period more than 3 years. The top soil shall be used for land reclamation and plantation.</p>	<p>At present there is no generation of top soil as the mining operation is being carried out by laterally as well as depth wise where laterite and iron ore is exposed. Around 19300 m³ top soils were produced from the mine and approx. 17200 m³ of top soil has already been utilized for plantation work in the part surrendered area. The Balance 100 m³ of top soil has been stacked separately for future utilization in the ear marked site. Terracing has been done and retaining wall has been constructed at the base of the dump to check soil erosion.</p>
(vi)	<p>The over burden (OB) shall be stacked at earmarked dump site only and it should not be kept active for long period. Proper terracing of OB dump should be carried out so that the overall slope shall not exceed 28 degree. Backfilling shall start from the second year onwards. The entire backfilled area shall be reclaimed by plantation. The back filling should be carried out in such a manner that it is restored to the normal ground level. The over burden dumps shall be scientifically vegetated with suitable native species to prevent erosion and In critical areas, use of geo textiles shall be undertaken for stabilization of the dumps.</p>	<p>Over burden is being dumped as per the Mining plan earmarked dumping areas only. The dump height is being maintained with terracing at about 15 meters with maintaining slope moderately less than 28 degree. The inactive dumps slopes are vegetated with native species to prevent soil erosion and surface run-off. Monitoring and management of rehabilitated areas are being continued till the vegetation becomes self-sustaining. The compliance status is regularly sent to the Regional Office, Ministry of Environmental & Forest Bhubaneswar once in six month.</p>

SPECIFIC CONDITIONS:

SL.NO.	CONDITION	COMPLIANCE
	<p>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.</p>	
(vii)	<p>Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine working, soil, over burden and mineral dumps. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after monsoon and maintained properly. Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and over burden dumps 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 should also provide adequate retention period to allow proper settling of silt material.</p>	<p>Garland drains of 1200 meters with settling ponds and retaining walls have been constructed at the base of the OB dumps to prevent run off of water and flow of sediments directly into the water bodies. Settling ponds of total nine (9) nos. have been constructed at the corner of the garland drains to take care of runoff even during peak rainfall and they are de-silted regularly during and after monsoon. Twenty five (25) nos. of guard walls have been constructed along the valley slopes to arrest the loose sediments. In addition to above Ten (10) nos. of settling ponds are constructed at various location of the mine and the water is being stored in the ponds from natural sources during rainy season. The collected water regularly used for water sprinkling on haul roads, loading and unloading points and plantation works through mobile water tankers of 20KL 02 nos, 8KL 02 nos and 4KL capacities.</p> <p>Note: Out of 1200 meters, 100 meters of garland drain has been constructed during the reporting period.</p> <p>03 numbers of settling ponds and 09 numbers of guard walls have been constructed during the reporting period.</p>

SPECIFIC CONDITIONS:

SL.NO.	CONDITION	COMPLIANCE
	Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.	
(viii)	Dimension of the retaining wall at the toe of dumps and over burden benches within the mine to check run-off and siltation should be based on the rainfall data.	Total Twelve (12) nos. of retaining walls of different dimensions having length of 910 meters have been constructed at the base of the OB dumps to arrest run-off and siltation. The dimensions of the retaining walls are decided basing on the rainfall data of the area
(ix)	Plantation shall be raised in an area of 151.519ha including a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, 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 hectare.	Plantation has been raised in an area of 22.75 Ha and 6 km running of avenue plantation of both side of haul road and 7.5m width green belt (safety zone area) around the mining lease, OB dumps, mine benches, along the road by planting the native species in consultation with the local Divisional Forest Officer, Rairangpur Division at the density of 2500 plants per Ha.
(x)	Regular water sprinkling should be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, around crushing and screening plant, loading and unloading point and transfer points. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	Regular water spraying is being done loading & unloading points, screening plant area are provided with water sprinkling arrangement along with mist gun sprayer system particularly at material transfer points (hopper, chute etc.). All the transportation & haulage roads are water sprinkled through mobile water tanker of capacity 8000 liters. A grader is being deployed for proper maintenance of haulage road. The ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board is being ensured.

SPECIFIC CONDITIONS:

SL.NO.	CONDITION	COMPLIANCE
(xi)	The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	Rainwater harvesting structure on long term basis has been constructed at the seasonal nalla for conservation of water. We are undertaking periodically renovation & de-siltation of the village ponds, seasonal nalla at nearby villages situated within 05 kms radius of the lease boundary as a measure to harvest the rain water and augment the ground water resources of the area. The storage-cum-percolation tanks are also constructed at suitable location for the purpose.
(xii)	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.	Regular monitoring of ground water level and quality has been done in and around the mine lease at the upstream and downstream four times in year. The monitoring has been done by engaging reputed consultant (an ISO 9002 certified) as mentioned in the condition. It is observed that the groundwater table is not depleted. On the other hand it is maintained because of various recharge structures constructed in the lease area as well as in nearby villages. Water level monitoring of surrounding villages is being done on regularly basis.
(xiii)	The project proponent shall obtain prior approval of the competent authorities for drawl of requisite quantity of water (surface and/ or ground) for the project	For withdrawing ground water for mining and allied activities a hydro geological studies around 10 K.M. radius of the M.L. area duly approved and also obtained no objection order for withdrawing ground water issued by the government of India, Ministry of Water Resources, Central Ground Water Authority, New Delhi.

SPECIFIC CONDITIONS:

SL.NO.	CONDITION	COMPLIANCE
	before commencing work on the project.	
(xiv)	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board.	Rainwater harvesting ponds and ground water recharge structure on long term basis has been constructed at the seasonal nalla for conservation of water and now they are in operation.
(xv)	Minerals handling plant should be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	Effective and high efficiency dust extraction systems are in place at the mineral handling plant. Loading and unloading areas including transfer points have been provided with dust suppression facilities. The dust extraction systems (Dry fog system) are fitted at hopper and every discharge points of screening unit. The emission from the dust extraction system is less than 150mg/Nm ³ .
(xvi)	Vehicular emissions should 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 vehicles should be covered with a tarpaulin and shall not be overloaded.	All vehicles are properly maintained to prevent emission of harmful fumes etc. used in mining operation and transportation of minerals. Regular vehicular emission testing is being conducted once in every 6 months. The vehicles those who do not meet the emission standard, are withdrawn from operation and maintained properly. It is ensured that no overloading is done and coverage by tarpaulin is being done during the O.B and fines transportation.
(xvii)	Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	Blasting is being done only day time between 12.00 A.M to 1.00 P.M. Wet drilling and control blasting is carried out for control of ground vibrations and to arrest fly rocks, as per the recommendations of CENTRAL INSTITUTE OF MINING & FUEL RESEARCH (Council of scientific & Industrial Research) Barwa Road, Dhanbad (Jharkhand). The ground vibration monitoring result is enclosed herewith for ready reference.

SPECIFIC CONDITIONS:

SL.NO.	CONDITION	COMPLIANCE
(xviii)	Drills shall either be operated with dust extractors or equipped with water injection system.	Drilling is being done with water injection system. All drills are also provided with dust suppression system.
(xix)	Consent to operate should be obtained from the State Pollution Control Board prior to start of enhanced production from the mine.	The mine has accorded Consent to Operate issued by the Member Secretary, State Pollution Control Board, Orissa, Bhubaneswar vide their letter No. 4848/IND-I-CON-250 dated 19.03.2016 and order No. 212 under Section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 with validity up to 31.03.2020.
(xx)	Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and wastewater generated during mining operation.	Each quarter of the colony provided with septic tank and soak pit for treatment of domestic effluent generated from the colony. Thus ETP is not required since there is no workshop and no waste water generated during mining operation. STP is under construction for treatment of domestic waste water generated from the colony.
(xxi)	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area and contributes 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 Government. 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 mine is taking all precautionary measures towards conservation & protection of endangered flora & fauna. The Wildlife Management Plan and Site Specific Conservation Plan have been prepared in respect of Gorumahisani Iron ore mine and it is duly approved by the Principal Chief Wild life Warden, Orissa. Rupees 65,00,000 /- (Rupees Sixty Five lakhs) has been deposited with the Forest Department for implementation of the above plan in order to protect them within and its periphery of lease area. The copy of the same already been submitted to the Ministry of Environment & Forests and its Regional office located at Bhubaneswar for their kind information

SPECIFIC CONDITIONS:

SL.NO.	CONDITION	COMPLIANCE
(xxii)	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 Final Mine Closure Plan in respect of Gorumahisani Iron Ore Mine over an area 1085.80 ha relinquished part of M.L. area duly approved by the Indian Bureau of Mines Bhubaneswar. The copy of the approved Final Mine Closure Plan has already been submitted to the Ministry. Further, another Final Mine Closure Plan for 349.50 Ha has been submitted to IBM for their kind approval and the approved by the Indian Bureau of Mines vide letter No. FMCP/OTFM/27-ORI/BHU/2018-19 dated 27.09.2018.

GENERAL CONDITIONS:

SL.NO.	CONDITION	COMPLIANCE
(i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests	There is no change in mining technology and scope of working
(ii)	No change in the calendar plan including excavation, quantum of mineral iron ore and waste should be made	Calendar plan prepared is being strictly adhered to the project
(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.	Ambient air quality is being monitored periodically to check the parameters like RPM, SPM, SO ₂ & NO _x at four different stations within the core zone & buffer zone of lease area. The stations were located in Consultation with the visiting officers of State Pollution control Board, Orissa. All the parameters are within the prescribed limit. Copies of monitoring reports are enclosed herewith for ready reference.
(iv)	Data on ambient air quality (RPM, SPM, SO ₂ & NO _x) should be regularly submitted to the Ministry including its Regional	Being followed

	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	Regular water spraying is being done at haul roads, loading & unloading points for effective dust suppression through mobile water tanker having 8000 liters capacity. Fixed water sprinkler have been put in to operation on the haul road of length 100 meter. The ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board is being ensured.
(vi)	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs	<p>All equipments are designed to control noise levels not exceeding 85 dB(A) as given below:</p> <ul style="list-style-type: none"> ➤ Proper encasement of noise generating sources has been done to control the noise levels below 85 dB (A) ➤ Turbine generators, compressors are provided with acoustic enclosures. Machines are housed in building & provided with acoustic enclosures as required to maintain noise levels within limits ➤ The operator's cabin (control room) are properly (acoustically) insulated with special doors and observation windows ➤ The silencers and mufflers of the individual machines are regularly checked ➤ Proper maintenance, oiling and greasing of machines is being done at regular intervals to reduce generation of noise ➤ In order to reduce the effect of noise pollution, earmuffs are provided to all operators and employees working near the machinery ➤ Occupational health survey is regularly undertaken by GMSPL by engaging qualified doctors and no noise induced hearing loss cases have been found in the occupational health survey camps

GENERAL CONDITIONS:

SL.NO.	CONDITION	COMPLIANCE
(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	As it is an open cast mine no waste water is generated during the mine operation. The mining operation is going on by deploying Heavy Earth Moving Machinery (HEMM) to remove the over burden from quarries. Blasting is being practiced to extract iron ore (ROM) from the quarries. Then shorting and sizing of ore is being done by engaging labourers manually. Screening units are under operation to recover small size iron ore from waste.
(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	Workers are provided with protective respiratory devices & time to time training on safety & health aspects is being provided. Occupational Health Surveillance Program of the workers is being undertaken periodically (annually once) along with the PREMEDICAL EXAMINATION OF PERSONS EMPLOYED, WHO ARE ENGAGED IN THE PROCESS OF MINING & ARE LIKELY EXPOSED TO DUST to observe any contractions due to exposure to dust and take corrective measures, if needed. This is being carried as per in compliance to Mines Act 1952 & rules 1956 and amendments there to
(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	A separate environmental management cell (EMC) has been designed at site under the control of Project-HEAD Mines, which is looking after all environmental activities including Environmental Monitoring and 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 diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Bhubaneswar	The funds earmarked for environmental Protection are being utilized for the same only.

GENERAL CONDITIONS:

SL.NO.	CONDITION	COMPLIANCE
(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 is a running mine. No specific date for start of land development work can be assigned. However, the copy of the Environmental Clearance has been sent to the Regional Office, Ministry of Environment & Forests Bhubaneswar for their kind information
(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 are extending full co-operation during inspection by MoEF officers of Regional Office, Bhubaneswar by furnishing the requisite data/ information/ monitoring reports etc.
(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	Being followed
(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	Compiled by SPCB
(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	Complied

GENERAL CONDITIONS:

SL.NO.	CONDITION	COMPLIANCE
	clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubaneswar	
(xvii)	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection	The project abide by the said instruction
(xviii)	Failure to comply with any of the conditions mentioned above <i>may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986</i>	<i>The project abide by the said instruction</i>
(xix)	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by any Court of Law relating to the subject matter	The provisions of the Water (Prevention) & Control) Act, 1974, the Air (Prevention & Control) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 are Being followed.



Gorumahisani Iron Works



NURSERY AT GORUMAHISANI IRON ORE MINES HAVING 1,00,000 PLANTS CAPACITY



PLANTATION ALONG THE ROAD SIDE



PLANTATION ALONG THE ROAD SIDE



PLANTATION IN EAST BLOCK AREA



PLANTATION INSIDE THE SAFETY ZONE AREA



PLANTATION IN THE ADJOINING SURRENDERED AREA



DUMP TERRACING AT N-INCLINE QUARRY



BOULDER WALL NEAR VILLAGE SUNDHAL



BOULDER WALL AT VILLAGE BALIKHANI



STONE WALL ALONG THE BANK OF SEASONAL NALLA



PITCHING AT BHESRAKOCHA NALA



STONE WALL AT SEASONAL NALLA



SETTLING TANK



BOULDER WALL ON SEASONAL NALA



BOULDER WALL ON SEASONAL NALA



VIEW OF STONE WALL/GUARD WALL AT DIFFERENT NALLA



VIEW OF WATER TANKER AND FOG MACHINE BEING USED FOR WATER SPRINKLING PURPOSE



MOBILE CRUSHER PLANT WITH WATER SPRINKLING SYSTEM