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RUDRA SEN SINDHU

ROHTAK ENGINEERING WORKS (MAIN ROAD, BARBIL, NEAR-S.B.I) (EX-CAPT)

P.O.-BARBIL-758035, DIST.-KEONJHAR, ODISHA HEAD OFFICE: ROHTAK, HARYANA

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	RSS/	/MoEF	&	CC/Comp/2019/ 2 8	-

Date28.05.2019

The Director (S),

Regional Office (EZ), Ministry of Environment, Forest & Climate Change, A-31, Chandrasekharpur, Bhubaneswar.

Sub: Half yearly Environmental Clearance Compliance Report of Bhanjapali, Koira & Teherai Manganese Ore Mines Sri Rudrasen Sindhu for the period October, 2018 to March, 2019 – Reg.

Ref: 1 MoEF Clearance letter no. J-11015/799/2007-IA.II(M) dated 31st July, 2009

2. MoEF&CC notification no. 4624 (Published in Gazette of India) dt. 26.11.2018

Dear Sir,

With reference to the above mentioned subject, we would like to inform you that, mining activity in Bhanjapali, Koira & Teherai Manganese Ore Mines Sri Rudrasen Sindhu started its operation from dt. 13.09.2018 after obtaining different statutory clearances. So, we are herewith submitting the compliance status of environemntal clearnce conditions mentioned in the Environemental Clearance letter for the reporting period October, 2018 to March, 2019 onwards.

This for your kind information, please.

Yours sincerely,

For Sri Rudrasen Sindhu

Bhanjapali, Koira & Teherai Manganese Ore Mines

Mines Manager
Mines Manager
En Chanjapali Mn. Mines
Sri Rudra Sen Sindhu

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Six Monthly EC Compliance Report Period: October 2018 to March-2019

BHANJAPALI, KOIRA AND TEHERAI MANGANESE ORE MINES
SHRI RUDRASEN SINDHU

Bhanjapali, Koida, Sundergarh http://bttmm-rs.com

SL. NO	SPECIFIC CONDITIONS	STATUS AS ON DATE / ACTION TAKEN
I.	All the conditions stipulated by the State Pollution Control Board, Orissa in their consent to Establish shall be effectively implemented.	The project has obtained Consent to Establish and Consent to Operate for extraction of manganese ore of 6000 TPA. The compliance to the conditions stipulated in the consent to operate is submitted to the pollution control board once in a year.
II.	Necessary forestry clearance under the Forest (Conservation) Act, 1980 for an area of 44.95 ha forestland involved in the project shall be obtained before starting mining operation in that area. e. No mining shall be undertaken in the forest area without obtaining requisite prior forestry clearance.	The Forest clearance has been obtained over an area of 41.839 Ha. From MoEF and presently the mining operations are limited to above forest clearance area only.
III.	The environmental clearance is subject to approval of the State Land use Department, Government of Orissa for diversion of agricultural land for Nonagricultural use.	The requirement of agricultural land does not arise and we will abide by the conditions.
IV.	The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table. In case of working below the ground water table, prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained, for which a detailed hydrological study shall be carried out.	Mining operation in the existing pits are above the ground water table and there is no chance of intersection of ground water table as per the approved Mining Plan by IBM. Therefore, intersection of ground water table during the present working scheme period of the ML area will not occur.
V.	The project proponent shall develop fodder plots in the non-mineralized area in lieu of the use of the grazing land.	The project is working on it towards identification of the fodder plots in the non-mineralized area after complete exploration and the same area will be developed for grazing land.
VI.	The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. Adequate measures shall be taken for conservation and	No natural water course & water sources have been obstructed by the mining activities. Besides this necessary precautionary measures will be taken care in due course of time for protection of the

	protection of the first order and second order streams emanating/passing through the mine lease area during the course of mining operation.	nearby water bodies to avoid any sort of interference like providing proper desilting structures, gully plugs & guard walls before disposal to outside.
VII.	The top soil, if any shall temporarily be stored at earmarked site(s) only and it shall not be kept unutilized for long. The top soil shall be used for land reclamation and plantation	The top soil generated in the initial phase of operation is being stacked at ear marked area and stored temporarily and it will be used for reclamation and plantation purposes.
VIII.	The over burden (OB) generated during the mining operation shall be temporarily stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and their phase-wise stabilization shall be carried out. Back filling shall commence from 7th year onwards and there shall be only one external dump. Proper terracing of the OB dump shall be carried out so that the overall slope shall not 28 degrees. The OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of coir geotextiles shall be undertaken for stabilization of the dumps. Monitoring and management of rehabilitated areas shall continue until vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional office, Bhubaneswar on six monthly basis.	As mines has come into operation in 2018, so the project is stacking the OB at an earmarked site inside ML Area as per the Mining Plan and the Dump will have number of terraces as per approved mining plan with proper height and dump slopes. The project will also provide garlanding drain, retaining wall along with Coir Geo-textiles on the dump slopes for stabilization of the dump. As far as back filling is concerned the project will commence back filling from 7 th year onwards or as per approved Scheme of Mining.

IX.	Catch drains and siltation ponds of appropriate size should be constructed around the mine working soil, mineral and OB dumps to prevent run off water and flow of sediments directly into Suna nadi, Teherei Nallah, the Karo nallah, the Samij nallah and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall 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 the temporary OB dumps to prevent run off of water and flow of sediments directly into the 1st order and 2nd order streams, 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. Dump capacity 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.	In the entire area, where ever possibility of wash off, flow of sediments etc. is anticipated; the project will provide retaining wall, garland drain and check dam all around the dumps to prevent the mines run off. The details of the Retaining wall followed by garland drains, Check dams, Sedimentation pit, silting pit structures will be constructed based on the annual average rain fall data. Beside this, village ponds will also be constructed in nearby villages along with catch drains and sedimentation pits in order to avoid the silt entry into first and second order streams as well as nearby water bodies. Time to time de-silting activity will also be followed.
X.	Dimension of the retaining wall at the toe of temporary OB Dumps to check run-off and siltation shall be based on the rain fall data.	The sub grade and OB/Waste dumps are maintained with proper heights with terracing & proper slope with adequate protection measures from erosion during rainy season.
XI.	The void left unfilled in an area of 8.935 Ha shall be converted into water body. The higher benches of the excavated/mining pit shall be planted to stabilize the slopes. The slope of the higher benches shall be made for easy accessibility by the local people to use the water body. Peripheral	We will abide by the said condition.

	fencing shall be carried out along the excavated area.	
XII.	Plantation shall be raised in an area of 7.439 ha including a 7.5 m wide green belt in the safety zone around the mining lease, back filled and reclaimed area, mine benches, along the roads etc. by planning the native species in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2500 plants per hectare.	Plantation of native species saplings will be carried including the gap filling during the period 2018-19 across the safety zone, blank spaces etc. Regular monitoring with provision of watering facility will be extended during non-monsoon period.
XIII.	Effective safe guard measures such as regular water sprinkling should be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	1 x 10 KL capacity Water Tanker provided for adequate water sprinkling in the entire mine haul roads, transportation area as required. The monitoring of AAQ is being done in the core as well as buffer zone of the ML area.
XIV.	Regular monitoring of the flow rate of the springs and perennial nallah shall be carried out and records maintained.	Regular monitoring of water flow rate in Perennial Nalla and rivers on seasonal basis is being carried out and the record is also maintained.
XV.	Regular monitoring of water quality upstream and downstream of the Teherei Nallah, the Karo nallah, the Samij nallah shall be carried out and record of monitored data should be maintained and submitted to Ministry of Environment and Forest, its Regional Office, Bhubaneswar, the Central Groundwater Authority, the Regional Director, the Central Ground Water Board, the State Pollution Control Board and Central Pollution Control Board.	Regular monitoring of water quality is being carried for both upstream and down streams of nallahs and rivers on seasonal basis. The data are being maintained and submitted to authorities regularly.
XVI.	The project authority should implement suitable conservation measures to augment ground resources in the area in consultation with the Regional Director,	In this regard, the project has planned to construct number of Check weirs, Check dams, de-silting ponds at the strategic locations of the mines lease area.

	Central Ground Water Board.	
XVII.	Regular monitoring of ground water level and quality should be carried out in around the mine lease by establishing a network existing well and constructing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year Pre –monsoon (April-May), Monsoon (August), Post monsoon (November) and Winter (January); once in each season)] shall be carried out in consultation with the state Ground Water Board/Central Ground Water Authority 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. If at any stage, it is observed that the ground water table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.	Monitoring of the ground water level and quality is being carried out. The ground water quality and ground water level is being monitored 4 times a year i.e. premonsoon, monsoon, post monsoon & winter. Regular monitoring of ground water quality & level is being carried-out by utilizing the ground water level meter periodically as specified.
XVIII.	Appropriate mitigate measures shall be taken to prevent pollution of the Suna Nadi in consultation with the SPCB.	The project has planned to implement site specific pollution prevention measures for prevention of mines run off into the nearby water bodies. After construction of proper measures say Check dams, Check weirs, Settling Pits, garland drains, trenches etc., the same will be informed.
XIX.	The project proponent shall obtain necessary permission of the competent Authorities for drawl of requisite quantity of water (surface water and ground water) required for the project.	We will abide by the said condition.
XX.	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board.	In this regard, the project has planned to construct number of settling cum percolation ponds and de-siltation of the village ponds surrounded by ML area towards percolation cum rain water

		harvesting purposes and the same will be de-silted after each monsoon.
XXI.	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 the covered trucks only and vehicles carrying the mineral shall not be overloaded. No transportation of ore outside the mine lease area shall be carried out after the sunset.	We are regularly monitoring the emission of the vehicle to ascertain whether the vehicle meet the pollution norms. The vehicles which are carrying the loaded materials are being released with tarpaulins covers and steps were initiated to ensure that the trucks will not be overloaded.
		We ensure the preventive measures are being under taken for maintenance of vehicles used in mining operations and for transportation of mineral.
		Transportations is being carried out as per the district Administrative <i>i.e.</i> DDM, Koida.
XXII.	Blasting shall be carried out only during day time. Controlled blasting shall be practiced. The mitigate measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	The Blasting is being carried out during day time only. Controlled blasting is being practiced under strict supervision.
KXIII.	Drills shall either be operated with dust extractors or equipped with water injection system.	There is no such drilling activity is performed during the reporting period. However, if any we will follow the wet drilling system.
XXIV.	Mineral 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.	As mining is carried on manual method, so there is no use of mineral handling plants. Its being carried by engaging local skilled laborers for picking and size separations of the ore.
XXV.	Sewage treatment plant should be installed for the colony. ETP shall also be provided for the workshop and waste water generated during the mining operation.	Not Applicable, as mines operation is very small and method of mining is manual. However, the machines engaged in mines by the Contractors is being maintained at their respective workshops.

	Consent to operate has been obtained
Consent to operate shall be obtained from the State Pollution Control Board, Orissa prior to start production from the mine.	Consent to operate has been obtained from the State Pollution Control Board, Orissa vide consent order no-2847, letter no-13655/IND-I-CON-6397 dated 11.03.2017 for production of the manganese ore of 6, 000 TPA.
The project authority shall undertake sample survey to generate data on preproject community health status within a radius of 1 km from proposed site.	We will abide by the said conditions.
Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	The project is carrying the IME/PME of employees/workers working in the mines for permanent and outside employees, who are engaged in the process of mining & are likely exposed to dust to observe any contractions due to exposure to dust. This is being carried as per in compliance to Mines Act 1952 & rules 1956 and amendments there to.
The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely elephant, sloth bear etc. spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. All the safeguard measures brought out in the wild life conservation plan prepared specific to this project site shall be effectively implemented. Necessary allocation of the funds for implementation of the conservation plan shall be made and funds so allocated shall be included in the project cost. A copy of action plan may be submitted to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar.	A Site specific Wildlife Conservation plan got approved, Besides this site specific measures like moisture conservation measures & controlled blasting and different awareness program will be implemented for conservation and protection of fauna in the area.
Provision shall be made for the housing of	Not applicable. As there is no such
	the State Pollution Control Board, Orissa prior to start production from the mine. The project authority shall undertake sample survey to generate data on preproject community health status within a radius of 1 km from proposed site. Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely elephant, sloth bear etc. spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. All the safeguard measures brought out in the wild life conservation plan prepared specific to this project site shall be effectively implemented. Necessary allocation of the funds for implementation of the conservation plan shall be made and funds so allocated shall be included in the project cost. A copy of action plan may be submitted to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar.

	necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	
XXXI.	The critical parameters such as RSPM (Particulate Matter with size less than 10 micron i.e. PM10) and NOx in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharge water shall also be monitored [(TDS, DO, pH and total suspended solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the company in public domain. The circular no. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.	The said critical parameters are being monitored periodically. Further the data is also made available at our website http://bttmm-rs.com.
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.	We will abide by the said condition.

SL. NO	GENERAL CONDITIONS	STATUS AS ON DATE / ACTION TAKEN.
01	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	We will abide by the said condition.
02	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.
03	At least four Ambient Air Quality – Monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (particulate matter with size less than 10 micron i.e. PM10), SO ₂ & NO _X monitoring. Location of the stations should be decided based on the metrological 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 as per NAAQs notifications made by the CPCB.
04	Data on ambient air quality (RSPM (Particulate matter with size less than 10 micron i.e. PM10), SO ₂ & NO _x) should be regularly 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.	The monitoring data of the ambient air quality is being submitted to Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.
05	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and transfer points should be provided and properly maintained.	The monitoring of fugitive dust is being carried out in the mining lease area.
06	Measures should be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.	The project has taken protective measures like providing all the safety gadgets to all the workers and employees working in the project and the noise level monitoring is also carried on regular basis as specified and the results are very well within the norms.

SL. NO	GENERAL CONDITIONS	STATUS AS ON DATE / ACTION TAKEN.
07	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 th December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	Not Applicable, as mines operation is very small and method of mining is manual. However, the machines engaged in mines by the Contractors is being maintained at their respective workshops.
08	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 engaged in mining are provided with earplugs / muffs, besides this acoustic enclosure for all machine operating cabins are provided. It is being monitored by Noise Level Meter; the results reveal the noise levels are well within the norms. The project is carrying IME/PME of employees/workers working in the mines for permanent and outside employees, who are engaged in the process of mining & are likely exposed to dust to observe any contractions due to exposure to dust. This is being carried as per in compliance to Mines Act 1952 & rules 1956 and amendments there to. The IME includes various tests say PFT, X-Ray & lungs spirometery etc.
09	A separate environmental management cell with suitable qualified personnel should be setup under the control of a senior executive, who will report directly to the head of the organization.	
10	The funds earmarked for environmental protection measures should be kept in separate account and should not diverted or other propose year wise expenditure should be reported to the Ministry and Regional Office located at Bhubaneswar.	The funds earmarked for Environmental Protection measures are being utilized for the same only.
11	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	Not applicable.

SL. NO	GENERAL CONDITIONS	STATUS AS ON DATE / ACTION TAKEN.
	concerned authorized and the date of start of land development work.	
12	The Regional Office of the Ministry located at Bhubaneswar shall monitor complains of the stipulated conditions. The project authorities should extend full corporation 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.
13	The project proponent shall submit six month reports under status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environmental and Forests, its regional Office, Bhubaneswar, the respective zonal office of central pollution control board and state pollution control Board. The proponent shall upload the status of compliance of the EC conditions, including results of monitored data on their websites and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environmental and Forests, Bhubaneswar, the respective zonal office of central pollution control board and state pollution control Board.	Six monthly compliance reports on the status of the implementation of the stipulated environment safeguards are being submitted to respective authorities
14	A copy of clearance latter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal corporation, urban local body and local NGO, if any, from whom suggestion / representation has been received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	It has been complied for mining with intimating the letters to local Gram Panchayat, Municipality, DDM Office, Zila Parishad, Divisional Forest Officer etc.
15	State Pollution Control Board should display a copy of the clearance letter at the	It has been complied.

SL. NO	GENERAL CONDITIONS	STATUS AS ON DATE / ACTION TAKEN.
	Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.	
16	The environment statement for each financial year ending 31 st March in form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent the Regional Office of the Ministry of Environment and forests, at Bhubaneswar by e-mail.	The Project has planned to submit the annual environment statement in FORM –V for the financial year 2018-19 to your good office and the concerned State Pollution Control Board, Orissa as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently.
17	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 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 at Bhubaneswar.	We have advertised for mining project in the two different newspapers within the stipulated time period.