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ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ Karnataka State Pollution Control Board

"ಪರಿಸರಭವನ", 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ. 49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು - 560 001, ಕರ್ನಾಟಕ, ಭಾರತ

"Parisara Bhavana", 1st to 5th Floor, # 49, Church Street, Bengaluru - 560 001, Karnataka, INDIA

NO.KSPCB/SEO/MINE/CFE/2010-11/ 90

DATED:

16 JUN 2010

/ BY REGD. POST WITH ACK. DUE /

To:
 The Managing Director
 M/s. Mineral Enterprises Limited.
 No.300, 1B, 16th Cross
 Sadashivanagar, Bengaluru - 560 008.

Sir,

Sub : Issue of Consent for Establishment (CFE) for Iron & Manganese Ore mine of capacity 1.4 Million TPA & 9,621 TPA respectively as mentioned in approved IBM Mining Plan No.MP/TMK/FeMn-231-SZ dated 16.2.2009, and Environmental Clearance issued by Ministry of Environment & Forests, Government of India, vide No.J-11015/73/2009-IA-II(M) dated 18.3.2010, in an area of 72.15 Hectares at Sy. No.11, 12(P), 69, 70, 71 & 74, Gollarahalli Village, C.N. Halli Taluk, Tumkur District, by Sarangapani Iron Ore & Manganese Ore Mine of M/s. Mineral Enterprises Limited.

Ref: 1. Your CFE application submitted at Regional Office, KSPCB, Tumkur, on 1.7.2009.
 2. Proceedings of 176th Board Meeting held on 1.12.2009.
 3. Guarantee money of Rs.14,09,700/- paid by the mining authorities on 3.6.2010.

With reference to the above, it is to be informed that this Board hereby accords consent for establishment under the Water (Prevention & Control of Pollution) Act 1974 and the Air (Prevention & Control of Pollution) Act 1981, for Iron & Manganese Ore mine of capacity 1.4 Million TPA & 9,621 TPA respectively as mentioned in approved IBM Mining Plan No.MP/TMK/FeMn-231-SZ dated 16.2.2009, and Environmental Clearance issued by Ministry of Environment & Forests, Government of India, vide No.J-11015/73/2009-IA-II(M) dated 18.3.2010, in an area of 72.15 Hectares at Sy. No.11, 12(P), 69, 70, 71 & 74, Gollarahalli Village, C.N. Halli Taluk, Tumkur District, by Sarangapani Iron Ore & Manganese Ore Mine of M/s. Mineral Enterprises Limited, subject to the following conditions.

1. This consent for establishment is valid for a period of Five years from the date of issue.
2. The applicant shall not undertake expansion/diversification without the prior consent of the Board.
3. The applicant shall obtain necessary license/clearance from other relevant statutory agencies before taking up construction.
4. There shall not be any complaints against the mine from the surrounding public.

[Signature]
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5. The mining activity shall be carried out strictly in accordance with the IBM approved Mining Plan No: MP/TMK/FeMn-231-SZ dated 16.2.2009.
 6. The applicant shall comply with all the conditions stipulated in the Environmental Clearance issued by MoEF, GOI, vide No. J-11015/73/2009-IA-II(M) dated 18.3.2010.
 7. The extraction of iron ore shall be carried out by mechanized open cast method only.
 8. The mining area shall not exceed 72.15 Hectares and in case of increase in mining area, separate CFE shall have to be obtained from Board.
 9. The mining and dumping activity shall be carried out systematically adhering to the Environmental Management Plan and Mining Plan approved by I.B.M.
- I. WATER CONSUMPTION:
1. The total water consumption shall not exceed 55 KLD. Out of which, 4 KLD shall be used for domestic purposes, 51 KLD for gardening and dust suppression.
- II. WATER POLLUTION CONTROL:
1. There shall not be any generation of trade effluent from any activity of mining process.
 2. The applicant shall use water sprinkling system to avoid dust nuisance/dust pollution in the mining area.
 3. The applicant shall treat the domestic effluent in septic tank with soak pit. No overflow from the soak pit allowed. The septic tank and soak pit shall be designed as per IS 2470 Part - I and Part - II.
 4. The mining authorities shall furnish the details regarding rainwater harvesting and groundwater recharging within 30 days from the date of issue of this CFE.
- III. WATER CESS:
1. The mining authorities shall comply with the provisions of Water (Prevention and Control of Pollution) Cess Act, 1977, by installing water meters, filing water cess returns in Form-I and other provisions as contained in the said Water (Prevention and Control of Pollution) Cess Act 1977, and 2003.
- IV. AIR POLLUTION CONTROL:
1. The project proponent shall not change or alter either the quality or quantity or rate of emission or install/replace or alter the air pollution control equipments, change in raw material or manufacturing process resulting in change in quality and/or quantity of emissions, shall be intimated to Board and shall obtain prior approval of the Board by furnishing all the information.

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2. The discharge of emissions from the premises of the applicant shall pass through the stack/chimney/outlet mentioned in Annexure-I of this consent order where from the Board shall be free to collect the samples at any time in accordance with the Act or Rules made there under.
 3. The Ambient Air Quality shall conform to the National Ambient Air Quality Standards (NAAQS) prescribed in Environment (Protection) 7th Amendment Rules 2009, as per Annexure-II enclosed.
 4. The applicant shall provide closed area for storage of raw material & to provide metallic road inside the plant premises.
 5. The applicant shall provide barricades/wind breaking walls on sides of the proposed area to avoid fugitive emissions/dust emission in surrounding area.
 6. The applicant shall provide additional air pollution control measures in case the pollutants exceed the specified norms.
 7. The Conveyor belts especially carrying smallest particles should be covered with suitable semi circular, MS Sheet/Zinc sheet and heaps shall be located in appropriate sheds wherever possible with all possible arrangements to prevent escape of dust during loading and unloading operation. Also suitable control measures like hood & cyclone system shall be provided.
 8. Suitable Water sprinkling system shall be provided to reduce the dust from each dust generation area.
 9. Minimum 5 rows with a minimum 50 meters wide green belt of tall growing leafy trees should be planted around the crusher plant area to minimize dust & improve aesthetic appearance.
 10. Suitable safety measures shall be provided to protect workers from the ill effect of dust pollution.
 11. The roads inside the crusher premises shall be metalled & water sprinkling arrangement shall be provided.
 12. The applicant shall construct bunkers for storage of fine dust with wind breaking wall, water sprinkling arrangement etc to mitigate the dust during the windy days.
 13. The suspended particulate matter contribution value at a distance of 40 meters from a controlled, isolated as well as from a unit located in a cluster should be less than $600 \mu\text{g}/\text{NM}^3$. The measurements are to be made at least twice a month for all the 12 months in a year and report has to be submitted to the Board.
 14. Wet drilling method shall be adopted to avoid dust emissions. Eco-friendly blasting material shall be used to minimize ground vibrations and flying rocks.
- V. NOISE POLLUTION CONTROL:
1. The industry shall ensure that the ambient noise levels at the boundary of the mine shall not exceed 55 dB(A) during day time and 45 dB(A) during night time as specified in the Environment (Protection) Rules 1986.

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VI. SOLID WASTE (OTHER THAN HAZARDOUS WASTE) DISPOSAL:

1. The project proponent shall dispose off all solid waste generated from the process in such a manner without causing underground and surface water pollution directly or indirectly. The solid waste shall be disposed off without causing eye sores to the public. The mining premises and the surroundings shall be kept clean. The mode of disposal of solid waste and the area selected for the same shall be got approved by the Board duly furnishing the relevant information within 30 days from the receipt of this consent for establishment.
2. The excavated pits shall be filled with overburden material and sufficient plantation shall be carried out as per the reclamation programme.
3. The dumping of overburden shall be done systematically as per the EMP in IBM approved mining plan.

VII. PROTECTION OF SOIL AND ITS CONSERVATION MEASURES:

1. Bunds of sufficient height and length to be constructed to stop the storm water flowing through the dumps of the mining area. This will prevent the rush of storm water carrying the loose soil down below either to the reservoir or to the fields.
2. Construction of sufficient check dams, gully plugs, retaining wall, and contour trenches to control soil erosion from the top of the dumps shall be undertaken as per approved Mining Plan of IBM.
3. The mining authorities shall construct trenches to prevent the speedy rush of water as well as the disturbance on the settled earth.
4. The mining authorities shall adopt continuous water sprinkling system to suppress the dust particles in the mining area and also while transporting the Iron Ore & Manganese Ore.
5. The mining authorities shall carryout reclamation of the mines area and shall take intensive afforestation measures.

VIII. AFFORESTATION MEASURES:

1. The mining authorities shall take up afforestation/compensatory afforestation as suggested by the Forest Department all along the boundary of mine and also in an area earmarked in IBM Plan from the first day of mine lease agreement. Also, a logbook on number of saplings planted, survival, etc., shall be maintained.
2. The mining authorities shall take up tree plantation continuously year after year during rainy seasons either under compensatory afforestation scheme or on their own to preserve the environment and nature's status quo in the mining area, an amount of minimum 2% of the turnover every year shall be earmarked for this purpose.
3. The mining authorities should take up intensive afforestation measures after stabilization of the dumps to prevent soil erosion and in consultation with Forest Department.
4. The mining authorities shall protect the environment and natural growth of vegetation in the area proposed for lease.

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IX. STORMWATER MANAGEMENT & EROSION PREVENTION:

1. The mining company should carryout soil and water conservation measures as suggested by the Ministry of Environment & Forests, Government of India, New Delhi, the Karnataka State Pollution Control Board and the Department of Mines and Geology. Also, water harvesting and groundwater recharge facilities shall be provided in the mining area.
2. The mining authorities shall ensure that the top soil from the mining operation shall carefully be removed without causing soil erosion, and siltation in the area/valleys.
3. The mining authorities shall dump the over burden in designated area as per IBM approved plan. The dump shall be periodically stabilized to take up plantation. Adequate numbers of retaining wall shall be provided to arrest run off. Continuous water sprinkling system shall be adopted to suppress dust nuisance.
4. The mining authorities shall take up recharging of groundwater sources in the mining area as and when the suggestions are made by the Department of Mines & Geology.

X. GENERAL :

1. The applicant shall maintain greenbelt all around the mining area and shall take up plantation continuously as per the advice of Forest Department.
2. The applicant shall maintain good road around the mining area as social obligation and also to mitigate dust pollution. The applicant shall earmark 2% of profit every year for the maintenance of roads used for the transportation.
3. The applicant shall take up additional plantation to the road sides in villages etc., as a social obligation.
4. The project proponent shall not undertake expansion/diversification/modernization, change of location of mining site etc., without the prior clearance from this Board.
5. The Board reserves the right to review/impose additional conditions or change or alter the terms & conditions of this consent for establishment.
6. The applicant shall avail training at EMPRI, Karnataka State Pollution Control Board, Bangalore, and furnish the certificate prior to applying for consent for operation for expansion.
7. The mining company should carryout soil and water conservation measures as suggested by the Ministry of Environment & Forests, Government of India, New Delhi, the Karnataka State Pollution Control Board and the Department of Mines and Geology from time to time.
8. The mining authorities shall adhere to all pollution control measures as per EMP and the approved Mining Plan of IBM.


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9. The mining authorities shall furnish Physical progress on the works to the Board once in 3 months.
10. The mining authorities shall maintain greenbelt all around to mining area in a width of 30 meters in the boundary.
11. Any damage to the Environment & Ecology because of uncontrolled mining, the company shall be liable for restoration of the damage and also to compensate the public/private property if it gets affected and also to bear the cost of restoration of environment damage.
12. This CFE does not give any right to the Party/Project Authority/Industry to forego any legal requirement that is necessary for setting/operation of the plant.
13. The mining authorities shall furnish point wise compliance within 30 days from the date of receipt of this consent for establishment.

Please note that this is only consent for establishment issued to you to proceed with the formalities to carry out mining by open cast method and does not give any right to proceed with trial/regular production. For this purpose, a separate consent of the Board for discharge of liquid effluent and the atmospheric emissions shall have to be obtained by remitting prescribed consent fee, separately, for air emissions and wastewater discharged. The application for consent has to be made 45 days in advance to your commissioning for trial production of the plant. Issue of consent will be considered only after completion of effluent treatment plant for domestic and installing air pollution control equipments as required.

The receipt of this letter may please be acknowledged.

FOR AND ON BEHALF OF
KARNATAKA STATE POLLUTION CONTROL BOARD

P. S. M. S.
SENIOR ENVIRONMENTAL OFFICER-6.

Encl.: Annexure-I & II.

Note:

1. It is advised to provide all necessary healthcare facilities to employees & local people and shall carry out routine health survey among employees & local people and tests like Spirometry, Pulseoxymetry, Lung function test, etc.
2. It is advised to regularly check the health of workers exposed to very high noise levels and suitable measures to avoid any ill effects shall be taken.
3. It is advised to take all safety measures to avoid any injury to its employees and local people as per the approved Onsite and Offsite Emergency Plan.

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ANNEXURE-II
NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

Pollutant	Time Weighted Average	Concentration in Ambient Air		Method of Measurement
		Industrial, Residential, Rural & other Areas	Ecologically sensitive area (Notified by Central Government)	
Sulphur Dioxide (SO ₂)	Annual* 24 Hours**	50 µg/m ³ 80 µg/m ³	20 µg/m ³ 80 µg/m ³	- Improved West and Gacke method. - Ultraviolet fluorescence.
Nitrogen Dioxide (NO ₂)	Annual* 24 Hours**	40 µg/m ³ 80 µg/m ³	30 µg/m ³ 80 µg/m ³	- Modified Jacob & Hochheiser (Na-Arsenite) Method. - Chemiluminescence.
Particulate Matter (Size less than 10 µm) or PM ₁₀	Annual* 24 Hours**	60 µg/m ³ 100 µg/m ³	60 µg/m ³ 100 µg/m ³	- Gravimetric. - TOEM. - Beta attenuation.
Particulate Matter (Size less than 2.5 µm) or PM _{2.5}	Annual* 24 Hours**	40 µg/m ³ 60 µg/m ³	40 µg/m ³ 60 µg/m ³	- Gravimetric. - TOEM. - Beta attenuation.
Ozone (O ₃)	8 Hours** 1 Hour**	100 µg/m ³ 180 µg/m ³	100 µg/m ³ 180 µg/m ³	- UV Photometric. - Chemiluminescence. - Chemical method.
Lead (Pb)	Annual* 24 Hours**	0.5 µg/m ³ 1 µg/m ³	0.5 µg/m ³ 1 µg/m ³	- AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper. - ED - XRF using Teflon Filter.
Carbon Monoxide (CO)	8 Hours** 1 Hour**	2 mg/m ³ 4 mg/m ³	2 mg/m ³ 4 mg/m ³	- Non dispersive infrared (NDIR) spectroscopy.
Ammonia (NH ₃)	Annual* 24 Hours**	100 µg/m ³ 400 µg/m ³	100 µg/m ³ 400 µg/m ³	- Chemiluminescence. - Indophenol blue method.
Benzene (C ₆ H ₆)	Annual*	5 µg/m ³	5 µg/m ³	- Gas Chromatography based continuous analyzer. - Adsorption & Desorption followed by GC analysis.

Pollutant	Time Weighted Average	Concentration in Ambient Air		Method of Measurement
		Industrial, Residential, Rural & other Areas	Ecologically sensitive area (Notified by Central Government)	
Benzo (a) Pyrene (BaP) - Particulate phase only.	Annual*	1 ng/m ³	1 ng/m ³	Solvent extraction followed by HPLC/GC analysis.
Arsenic (As)	Annual*	6 ng/m ³	6 ng/m ³	AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper.
Nickel (Ni)	Annual*	20 ng/m ³	20 ng/m ³	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 interval.

** 24 hourly/8 hourly/1 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.

Note:

Whenever & wherever monitoring results on two consecutive days of monitoring exceeds the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.

Prashant M
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ANNEXURE-I

Chimney	Air Pollution Source	Minimum Chimney Height to be Provided	Constituents to be controlled in the emission.	Tolerance limits $\mu\text{g}/\text{m}^3$	Air Pollution Control equipment to be installed, in addition to Chimney height as per Col (3)	Date of which air pollution Control equipments shall be provided to achieve the stipulated tolerance limits and chimney heights conforming to stipulated heights.
-	Iron Ore Crusher & Screening Plant - 250 TPH - 2 Nos.	-	SPM	600	To be Covered with MS Sheets and to be provided with water sprinkling (dry fog dust suppression system) arrangements.	Before commissioning
1	DG Set- 325 KVA	6 m Above roof level	-	-	Acoustic enclosure	Before commissioning
2	DG Set- 125 KVA	5 m Above roof level	-	-	Acoustic enclosure	Before commissioning
3	DG Set- 125 KVA	5 m Above roof level	-	-	Acoustic enclosure	Before commissioning

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