

I/27471/2024

MCDR inspection REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/414/BNG/VOL-I

Mine code : 30KAR03138

- (i) Name of the Inspecting : **S21**) **H M Shivakumar**
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : Shanmukhappa Mandal (Sr. Manager), Nandakumar H.M (Mi
Official with
Designation
- (iv) Date of Inspection : 16/11/2023
- (v) Prev.inspection date : 14/03/2023

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **RAMANMALAI**
- (b) **Registration NO.** : **IBM/178/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
State : KARNATAKA
District : BELLARY
Village : RAMGAD
Taluka : SANDUR
Post office : SANDUR
Pin Code : 583119
FAX No. : NIL
E-mail : vescosdr@yahoo.com,Vescopd(
Phone : 9611786655, 08395260183
- (f) Police Station : SANDUR
- (g) First opening date : 19/08/2002
- (h) Weekly day of rest : SUN
2. Address for : VESCO HOUSE 2/138
correspondance BALLARI Rd SANDUR
583119
3. (a) Lease Number : KAR0344
- (b) Lease area : 18.62
- (c) Period of lease : 50
- (d) Date of Expiry : 18/10/2042
4. Mineral worked : IRON ORE Main

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5. Name and Address of the

Lessee : VEERABHADRAPPA SANGAPPA & COMPANY
 # 2/138, BELLARY ROAD,
 HOSPET, BELLARY KARNATAKA
 Phone:08395-260120
 FAX :08395-260676

Owner : K S VINAYAK NOMINATED OWNER
 VESCO HOUSE 2/138, BELLARY
 RD SANDUR BELLARY KARNATAKA
 Phone: 08395260183
 FAX :

Agent : K S VINAYAK
 VESCO HOUSE 2/138, BELLARY
 RD SANDUR BELLARY KARNATAKA
 Phone: 08395260183
 FAX :

Mining Engineer

Name : IMRAN SHAIK, Full Time
 Qualification : BE MINING
 Appointment/ : 01/03/2013
 Termination date

Geologist

Name : S.MANDAL, Full Time
 Qualification : M.SC(MINERAL EXPLORATION)
 Appointment/ : 01/07/2012
 Termination date

Manager

Name : NANDAKUMAR H M
 Qualification : DIPLOMA IN MINING FCC
 Appointment/ : 26/09/2013
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Fresh under rule 22 MCR1960	08/12/1995
		Modif.of approved Mining Plan	06/03/2003
		Mining Scheme rule 12 MCDR1988	28/07/2006
		Mining Scheme rule 12 MCDR1988	01/10/2012
		Modif.approved Mining Scheme	31/12/2013
		Modif.of approved Mining Plan	24/02/2016
		Modif.of approved Mining Plan	16/09/2016
		MP modif under 17(3) MCR 2016	31/03/2022
		MP modif under 17(3) MCR 2016	20/07/2023

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	NIL	
1b	Exploration over lease area for geological axis 1 or 2	G1-40.73 Ha G2- 2.90 Ha G3 -1.86Ha G4 -7.67 Ha	G1-48.46 Ha G2 - 2.87 Ha G3 -1.83Ha	Exploration is under progress
1c	Exploration Agencies and Expenditure in lakh rupees during the year	8 no's of core boreholes with 400 mtrs proposed for the FY 2022-23	7 no's of core boreholes with 383 mtrs drilled for the FY 2022-23 by Geotech Exploration	1.47 Cr spent on exploration in the past. For the FY 2022-23Rs.9.92 lakhs are spent. The expenditure for the year is wrongly submitted in the AR-2022-23. Violation Issued.
1d	Balance area to be explored to bring Geological axis in 1 or 2	G1- 40.73 Ha G2 - 2.90 Ha G3 -1.86 Ha G4 -7.67 Ha	G1- 48.46 Ha G2 - 2.87 Ha G3 -1.83Ha	G2 & G3 area will be brought under G1 Scale.
1e	Balance reserve as on 01/04/20		32,009,953.00 MT of reserves as on 31.03.2023	As per AR submitted for FY2022-23
1f	General remarks of inspecting officers on geology, exploration etc		In general, the Iron Ore deposit is reef structure. The strike of the iron ore formation is due NW-SE, 2120 m of length and 210 m of avg. width & over all thickness of ore column is around 100 to 120 mts with high angle of dips towards North-East with an amount of dip varying from 53 to 60 degree. Mineralisation of Iron Ore is proved upto 890m depth.	Iron Ore is having approximately 75 to 80% of soft and friable (fines) and 20 to 25% of lumpy ore with Fe% varies from 58 to 60% and 60 to 64%. Exploration is under progress to bring the small areas under G2-2.87 Ha& G3-1.83 Ha to G1 level of exploration.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	N-1668650-1668770&E-659610-659760	N-1668653-1668763& E-659617-659750	Dumping of waste is done within the proposed grid intervals.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in mineral proposed.	Separate benches in overburden & mineral maintained.	During the RY Waste is encountered from dykes & small patches from BHQ in the mineral benches.
2c	Stripping ratio or ore to OB ratio	1:0.05	1:0.06	Reportedly Increase in stripping ratio is due to increase in generation of intercalated waste.
2d	Quantity of topsoil generation in m3	20 m3	22.22m3	Top soil generated has been utilized for coir matting over the dump slope and plantation
2e	Quantity of overburden generation in m3	28,120m3 50,616 tonnes	39444.44m3 71,000 tonnes	Increase in the overburden is due generation of intercalated waste.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The open pit mine is developed as a single pit operation with average bench height and width of 7 & 8m each respectively with 9 benches in the mineral suitable to the type of the deposit.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	1Pit proposed N-1669460 to 1670080 & E-658875 to 659352	Working carried out in 1 pit only N-1669460 to 1670080 & E-658875 to 659352	Approximate dimension of the pit of plan period Length- 780m, Width-122m, Depth-53 m

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3b	Quantity of ROM mineral production proposed	11,00,000.00 tonnes	11,00,000tonnes as on 31.03.2023	As per Annual return
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Proposed quantity achieved.
3d	Quantity of mineral reject generation	No Proposal	NIL	16130 tonnes of BHQ (Fe: +35 % to <45%) generated during FY 2018-19is stacked separately in mines
3e	Grade of mineral rejects generation and threshold value declared.	No Proposal	NIL	
3f	Quantity of sub grade mineral generation.	No Proposal	NIL	Generated during production which is blended with high grade ore & sold.
3g	Grade of sub grade mineral generation	No Proposal	NIL	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method proposed for segregating from ROM	Mechanizedmethod adopted for segregating from ROM	Dry Crushing (150 TPH) & Screening (250TPH)
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposal	NIL	
3j	Provision of drilling and blasting in mineral benches	Drilling & blasting proposed in mineral benches	5% volume of production & development is usedfor drilling& blastingin the FY, mostly in BHQ.	5% of the total volume proposed for drilling & blasting.
3k	Provision of mining machineries in mineral benches	Hydraulic excavator & tipper combination proposed	Mining operation carried out using excavator &tipper (10/20 tonnes) combination.	

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3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height- 7m, Width- 8m	YES Height- 7m, Width- 8 to 10m	As per the proposals.
3m	Total area covered under excavation/pits	32.556 Ha at the end of plan period	32.556Ha	As per Approved MAMP on dtd: 31.03.2022
3n	Ore to OB ratio for the pit/mine during the year.	1:0.05	1:0.06	
3o	Total area put in use under different heads at the end of year	Pit- 32.556 Ha Dump- 5.917 Ha Buildings-0.74 Ha Roads -0.317Ha Others-13.63 Ha	Pit- 32.556 Ha Dump- 5.917 Ha Buildings-0.74Ha Roads -0.317Ha Others-13.63 Ha	As per Annual Returns of FY 2022-23
3p	Production of ROM mineral during the last five year period as applicable	2017-18: 1.10MT 2018-19: 1.10MT 2019-20: 1.10MT 2020-21: 1.10MT 2021-22: 1.10MT 2022-23: 1.10MT	2017-18: 1.10MT 2018-19: 1.10MT 2019-20: 1.10MT 2020-21: 1.10 MT 2021-22: 1.0764 MT 2022-23: 1.10MT	As per Annual return
3q	General remarks of inspecting officers on method of mining etc.			Method of Mining is open pit mine with shovel-dumper combination & 5% of total excavation requiring deep hole drilling and blasting.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping for OB proposed	Separate dumping for OB carried out	OB is separate dumped in the proposed dump with terraces. Small quantity of Top soil is utilized to spread on the inactive terraces for plantation.

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4b	Location of topsoil, OB and mineral reject dumps	Top Soil- N-1668660.27 & E-659637.13	Top soil generated is utilized for coir matting over the dump slope and for plantation.	Dumping of waste is done within the marked area.
4c	Number of dumps within lease area and outside of lease area	WML : 1 dump OML : NIL	WML : 1 dump OML : NIL	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	OB Dump proposed outside the UPL	OB dumped outside the UPL on the south-eastern side of the ML area	Southeastern side away from UPL
4e	Number of active and alive dumps.	1 No'	1 No'	There is only one active dump.
4f	Number of dead dumps.	No proposal	NIL	
4g	Number of dumps established.	No proposal	NIL	Part of the active dump is stabilized by coir mat and plantation.
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall & garland drain proposed all along dumps	Retaining wall & garland drain are constructed all along the dumps.	Violation is issued for not completing the proposed length of RW and GD.
4i	Length of Retaining wall or garland drain all along dumps	RW-220 mtrs GD- 140 mtrs	RW-163mtrs GD-50mtrs As per PMCP report submitted for FY 2022-23	Violation is issued for not completing the proposed length of RW and GD.
4j	Number of settling ponds	No proposal	NIL	3 SST constructed in the past & is maintained.
4k	Specific comments of inspecting officer on waste dump management			One single waste dump located outside the UPL is systematically managed by stabilizing the inactive part of the terraces by way of coir matting and plantation. Also engineering structures like Retaining Wall and Garland drains are provided at the toe of the Dump.

Solid Waste Management - Backfilling:

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Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No proposal	NIL	No part of the Mine Pit is fully exhausted of Mineral for backfilling.
5b	Area under backfilling of mined out area	No proposal	NIL	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	22.22 m3	Generated top soil is utilized for laying of coirmat over the waste dump and for plantation
5d	Total area fully reclaimed and rehabilitated	No proposal	NIL	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			No part of the Mine Pit is fully exhausted of Mineral for backfilling.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	PMCP report to be submitted by 1st July every year	PMCP report for the FY 2022-23is submitted.	Submitted on 28.06.2023
6b	Area available for rehabilitation (ha) .	0.17 Ha	0.106Ha part of waste dump rehabilitated by coirmat on terrace no-1	Cumulative of 0.41 Ha of area is covered by Afforestation
6c	afforestation done (ha).	0.20 Ha	0.104 Ha area covered by plantation on waste dump & 0.16 Ha area gap plantations in safety zone.	Reported Cumulative of 0.294 Ha of area is covered by Afforestation appears to be correct.
6d	No. of saplings planted during the year	100 No's	402 No's	132- Green belt 20-Avenue 220- Dump

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6e	Cumulative no .of plants	----	8311no'sof seedlings 50100 no's of Agave suckers	Appears to be correct.
6f	Any other method of rehabilitation	Rehabilitation by coir mat	0.106 Ha area is covered by coir mat	Appears to be correct.
6g	Cost incurred on watch and care during the year	No proposal	Rs. 1,10,462.00	Appears to be correct.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal	NIL	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal	NIL	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	No proposal	NIL	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	NIL	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	NIL	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	NIL	

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6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	NIL	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	NIL	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring proposed in Core & Buffer zone	Environmental monitoring carried out in Core & Buffer zone. Monitoring carried out by Cosmo Laboratory Ballari.	<p>Buffer Zone Air-(So2-16.54, No2-16.96mg/m3) Pm10-52.08 Pm2.5- 15.36</p> <p>Core Zone Air- (So2-16.54, No2-18.25mg/m3) Pm10-51.25 Pm2.5- 15.75</p> <p>S. Water- (TDS-2013mg/l) G. Water- (TDS-678.00 mg/l)</p> <p>Soil-(pH-5.86)</p> <p>Noise-dB(A) Max'- 92.00 Min'- 68.00</p>
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			All the proposed PMCP activities are mostly carried out during the reporting year barring for lagging in construction of proposed length of Retaining Wall and Garland drain for which violation is issued.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting proposed in the lease area	Grade wise and size wise sorting is done within the lease area.	Processed Fines & Lumps are dispatched after processing likecrushing and screening of the ROM.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical sorting proposed	Mechanical method adopted for grade wise sorting (physical specification)	Dry Crushing (150 TPH) & Screening (250TPH)
7c	Different grade of mineral sorted out at mines.	Lumps: +10mm to -40mm Fe: 60-63.5% Fines: -10mm Fe: 58-63%	Lumps: (+10mm to -40mm) Fe: 60-62% Minimum Fe: 62-65% Maximum Fines: -10mm Fe: 55-58% Minimum Fe: 62-65% Maximum	Grade wise sorting done as per buyers' requirement
7d	Any beneficiation process at mines .	No proposal	NIL	Mobile dry crushing & screening plant are utilized.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			The low-grade Ores encountered during mining is suitably blended with high grade Ores to bring the entire mineral production to marketable grade thereby taking care of Mineral conservation. Beneficiation of ore does not arise.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	20 m3	22.22 m3	Generated top soil is utilized for laying of coirmat over the waste dump and for plantation.

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8b	Concurrent use or storage of topsoil	20 m3	22.22 m3	Generated top soil is utilized for laying of coirmat over the waste dump and for plantation.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump for overburden proposed	Separate dump of overburden maintained	Separate over dump is being maintained. No mineral reject dumps exist in the mine.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	NIL	No part of the Mine Pit is fully exhausted of Mineral foruse of overburden, waste rockfor restoring the land to its original use.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	NIL	Part of the waste dump terraces is stabilized by coir mat& plantation.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No proposal	402 No's of plantation done during FY 2022-23 at Green belt, waste dump & avenue side.	Cumulative of 8311no's of seedlings 50100 no's of Agave suckers appears to be correct.
8g	Survival rate	85 %	80%	Appears to be correct.
8h	Water sprinkling on roads to control airborne dust	Water sprinklings on haul roads proposed to control air borne dust	Regular water sprinkling is carried out by water tankers and water mist to control the air borne dust on haul roads &at screening plant etc.	5 no' of water tankerof capacity 6000, 8000 litresand 12000 litres capacity of water mistis used.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The Aesthetic beauty in and around the mine area is satisfactorily maintained by way of plantation.

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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted upto Oct 2023 A.R. Submitted for FY2022-23		MR submitted on 08.11.2023 AR submitted on 26.06.2023
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager: Nandakumar HM Mining Engineer: Imran Shaik Geologist: Shanmukhappa Mandal	All the reported officials were present on the day of inspection.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit- 32.556 Ha Dump- 5.917 Ha Buildings - 0.74 Ha Roads -0.317Ha Others-13.63 Ha	As per proposals.	
9d	Scrutiny of Annual return on afforestation	NIL		
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	NIL		

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9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening Balance- NIL Production: 11.00 lakhs tonnes Closing balance- NIL	As Annual Returns of FY 2022-23
		Dump Working: Opening Balance- 1575(t) Production: NIL Closing balance- 1575(t)	
		Production Lumps: 60-62% Fe- 12000.00 (t) 62-65% Fe- 208000.00 (t)	
		Fines: 55-58% Fe- 40000.00 (t) 58-60% Fe- 304000.00 (t) 60-62% Fe- 200000.00 (t) 62-65% Fe- 336000.00 (t)	

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9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale Value Lumps -4513.08 ?/ton, Fines - 3374.62 ?/ ton Ex-mine price Lumps - 60-62% Fe- 4132.23 ?/ ton 62-65%Fe- 4547.69?/ ton Fines - 55-58%Fe- 2405.42?/ ton, 58-60%Fe- 3386.45?/ ton 60-62% Fe- 3574.19 ?/ ton 62-65% Fe- 3238.63 ?/ ton Cost of Production 2260.57?/ ton	Cost of production is not calculated accurately including cost of exploration and Overhead charges. Violation issued.
9h	Scrutiny of Annual return on fixed assets	530.84285Lacs	From Annual Returns of FY 2022-23
9k	Scrutiny of Annual return on mining machineries	Excavator- 9 No's Wheel loader - 3 No's Back Hoe- 2 No's Dumper- 14 No's Rock Drill- 2 No's Crusher- 2 No's	Reported machineries were found to be deployed on the day of inspection.

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Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed				Show couse position			
Rule NO.	Issued on	Compliance on		Rule NO.	Issued on	Compliance on	
MCDR17 Rule 11(1)	22/12/2023	27/02/2024		MCDR17 Rule 45(7)	22/12/2023	22/02/2024	
MCDR17 Rule 45(7)(a)	22/12/2023	22/02/2024					

Date :**(H M Shivakumar)**

Indian Bureau of Mines