

## MCDR INSPECTION REPORT (2023-24)

S. No	Particulars	Details
1	Name of the Mine	<b>Ramanamalai Iron Ore Mine. (ML No-2296)</b>
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Forest land: 53.16 Ha Non Forest land: Nil
3	Mine Code	30KAR03138
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/178/2011
5	Name of the lessee, Address, phone, email and fax number	M/s. Veerabhadrappa Sangappa & Company, VESCO House, 2/138, Ballari road, Sandur. 08395-260348, 121
6	Village	Ramgad
7	Taluk / Mandal	Sandur
8	District	Ballari
9	Pin code	583119
10	State	Karnataka
11	Post office	Sandur
12	Nearest Police station	Sandur
13	Nearest Railway station	Yeshwanthanagar & Hosapete
14	Date of Grant of Mining Lease	17.02.2001
15	Date of Execution	w.e.f 17.02.2001
16	Date of Opening of Mine	19.08.2002
17	Date of first Renewal, if applicable and its period & expiry	02.09.2016 Supplementary lease deed executed for 50 years i.e. upto 16.02.2051
18	Date of second Renewal, if applicable and its period & expiry	----
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	K.S.VINAYAK, VESCO House, 2/138, Ballari road, Sandur. <a href="mailto:vescoped028@gmail.com">vescoped028@gmail.com</a> , 08395260183
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	K.S.VINAYAK, VESCO House, 2/138, Ballari road, Sandur. <a href="mailto:vescoped028@gmail.com">vescoped028@gmail.com</a> , 08395260183
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Nandakumar H.M VESCO House, 2/138, Ballari road, Sandur. 9611786641, 26.09.2013.
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Imran Shaik B.E mining with 15 yrs experience VESCO House, 2/138, Ballari road, Sandur. 9900069298, Date of Appointment: 01.03.2013
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	Shanmukhappa Mandal MSc. Geology (Mineral Exploration).
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Modification to the Approved Mining Plan- approved on 20.07.2023 valid up to 31.03.2026
26	Date of Approval of Scheme of Mining /	-----

	Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	
27	Mineral(s) granted in lease and proved for mining	Iron Ore
28	Method of Mining(Opencast ,Underground)	Opencast
29	Category (Fully Mechanized, Others or Manual)	Fully mechanized "A" Category opencast
30	Captive/ Non captive	Non captive
31	Previous Inspection Date	16.11.2023
32	Date of inspection	04.10.2024
33	Name of the Inspecting Officer	Dr. Sudhakara T.L., Senior Mining Geologist
33	Name of accompanying mine officials with designation	Shanmukhappa Mandal (Sr. Manager-Geology) Nandakumar H.M (Mines Manager) Imran Shaik (Mining Engineer) Satish K. Chougule (Geologist)

## 1. Exploration

S.N.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposals	Nil	
1b	Exploration over lease area for Geological axis 1 or 2.	20 no's of core boreholes with a total meterage of 1200m	25 no's of core boreholes with a total meterage of 1430 mtrs	G2 & G3 area is under non-FC area.
1c	Exploration Agency & Expenditure in lakh Rupees during the year	No proposal	DM Exploration & Geotech Exploration Rs.1.63 crore	As reported by lessee team, 1.63 Cr spent is spent on exploration.
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per approved Mining plan dated 20-07-2023 G1 -39.76 Ha G2 – 2.87 Ha G3 – 1.83 Ha	G1 -39.76 Ha G2 – 2.87 Ha G3 – 1.83 Ha The latest exploration data yet to be updated in the Mining plan.	As reported by lessee team during inspection G1 -42.66 Ha G2 – 0.86 Ha G3 – 0.94 Ha. The areas yet to be updated in the MP. The remaining area under G2 & G3 area is under non-FC area, hence, lessee has not undertaken exploration.
1e	Balance reserves (In tonnes)	As per approved Mod. Mining plan dated 20-07-2023 Reserves: 24611096 tonnes	23,511,096.00 tonnes of reserves as on 31.03.2024	Actual figures as per Annual Return submitted for FY 2023-24

1f	General remarks of inspecting officer on geology, exploration etc.	In the lease area, Iron ore deposit is of Stratiform deposit of regular habit, no major structural disturbances. The iron ore formation is of Reef type consisting of HIO & HSIO and BHQ patches, top portion of the ore body subjected to lateritization. Some weathered dykes observed cutting the iron ore formation. Out of 53.16Ha area 44.46Ha area is potentially mineralized, in which, lessee has explored 42.66Ha area under G1 level, remaining 1.8Ha area is under G2/G3 level where FC is awaited to take-up the exploration.
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## 2. Development

S.N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	N-1669530-16670160 & E-658728-659387	N-1669530-16670160 & E-658728-659387	Dumping of waste is done within the proposed extent.
2b	Separate benches in topsoil, overburden and mineral (Rule 13)	Separate benches in mineral proposed.	Separate benches in mineral maintained.	No separate benches proposed for OB due to waste is encountered mainly from dykes & small patches from BHQ and intercalated waste.
2c	Stripping ratio or ore to OB ratio	1 : 0.11 Ore: 1100000 OB: 119476 tons (66375 Cub.m)	1 : 0.07 Ore: 1100000 OB: 78,300 tons (43,500 Cub.m)	Reportedly decrease in OB is due to lessee generation of intercalated waste.
2d	Quantity of topsoil generation in m <sup>3</sup>	8.80 cub. m	8.80 cub.m	Top soil generated has been utilized for putting coir matting on waste dump and plantation
2e	Quantity of overburden generation in m <sup>3</sup>	66,375.74 m <sup>3</sup> 1,19,476.34 tons	43,500.00 m <sup>3</sup> 78,300.00 tons	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The open pit mine is developed as a single pit operation with regular benches. Waste is mainly generated as inter-bands & cutting dykes within the ore body. The adopted method is suitable to the type of the deposit.		

## 3. Exploitation

S.N.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	01 Pit proposed  N-1669530-16670160 & E-658728-659387	Working carried out in 1 pit only  N-1669530-16670160 & E-658728-659387	Approximate dimension of the pit Length- 470m, Width-156m, Depth-62m
3b	Quantity of ROM mineral production proposed	11,00,000 tonnes	11,00,000 tonnes	As per Annual Returns 2023-24
3c	Recovery of	100%	100%	

	salable/usable mineral from ROM production			
3d	Quantity of mineral reject generation	No Proposal	NIL	Lessee team reported that during the year 2018-19, 16130 tonnes of BHQ (Fe: +35 % to <45%) which has been stored separately in mines.
3e	Grade of mineral reject generation and threshold value declared	No Proposal	NIL	
3f	Quantity of sub-grade mineral generation	No Proposal	NIL	
3g	Grade of sub-grade mineral generation	No Proposal	NIL	
3h	Manual / Mechanized method adopted for segregating from ROM	Mechanized method (Crushing & Screening) proposed for segregating the ROM into lumps & fines	Proposed method adopted to spate the lumps & fines alongwith different grade of iron ore.	Dry Crushing (150 TPH) & Screening (250TPH)
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No Proposal	NIL	
3j	Provision of drilling & blasting in mineral benches	Drilling & blasting proposed in mineral benches	The ore type is soft & friable in nature. About 10 volume of production & development is used for drilling & blasting in the FY.	The ore type is soft & friable in nature. About 10 volume of production & development is used for drilling & blasting in the FY.
3k	Provision of mining machineries in mineral benches	Hydraulic excavator & tipper combination proposed	Mining operation carried out using excavator & tipper (10/20 tonnes)	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height- 7 m Width- 8m	YES Height- 7 m Width- 8m and above	The proposed bench dimension maintained, same also observed during processing of Drone data.
3m	Total area covered under excavation/pits	33.18 Ha at the end of reporting year as per Approved MAMP dtd: 20.07.2023	33.18 Ha at the end of reporting year (2023-24)	As per Approved MAMP dtd: 20.07.2023 & Annual Returns of FY 2023-24
3n	Ore to OB ratio for the pit/ mine during the year	1 : 0.11 Ore: 1100000 OB: 119476 tons (66375 Cub.m)	1 : 0.07 Ore: 1100000 OB: 78,300 tons (43,500 Cub.m)	Reportedly decrease in OB is due to lessee generation of

				intercalated waste.
3o	Total area put in use under different heads at the end of year	Pit- 31.99 Ha Dump- 6.30 Ha Building- 0.74Ha Roads- 0.11 Ha Others-14.02 Ha As per Approved MP dtd: 20.07.2023	Pit- 33.18 Ha Dump- 6.30 Ha Buildings- 1.14 Ha Roads- 0.11 Ha Others- 8.39 Ha Mineral Storage- 4.04 Ha	Actual area as per AR 2023-24
3p	Production of ROM mineral during last five-year period, as applicable	2019-20: 1.10 MT 2020-21: 1.10 MT 2021-22: 1.10 MT 2022-23: 1.10 MT 2023-24: 1.10 MT	2019-20: 1.10 MT 2020-21: 1.10 MT 2021-22:1.0764 MT 2022-23: 1.10 MT 2023-24: 1.10 MT	As per Annual Returns of FY 2023-24
3q	General remarks of inspecting officer on method of mining etc.	Method of Mining is open pit mine with excavator & tippers combination & about 10% of total excavation done by deep hole drilling and blasting. LUMPS & FINES with different grade segregated at mine site by crushing & screening of ROM.		

#### 4. Solid Waste Management-Dumping

S.N.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate dumping for OB proposed	Separate dumping for OB carried out	
4b	Location of topsoil, OB & mineral reject dumps	Top soil was proposed from virgin area of 8.80 m <sup>3</sup> <b>Waste Dump-</b> N-1669530-16670160 & E-658728-659387	8.80 m <sup>3</sup> of top soil was generated.  <b>Waste Dump-</b> N-1669530-16670160 & E-658728-659387	Lessee has utilized the top soil generated for coir matting on dump and plantation.  Dumping of waste is done within the earmarked location.
4c	Number of dumps within lease area and outside lease area	WML : 1 dump OML : NIL	WML : 1 dump OML : NIL	01 dump exists within ML
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	South eastern side away from UPL
4e	Number of active & alive dumps	1 No'	1 No'	
4f	Number of dead dumps	No proposal	NIL	
4g	Number of dumps stabilized	No proposal	NIL	Part of the active dump is stabilized by coir mat and plantation.
4h	Whether Retaining wall or	Retaining wall &	Retaining wall &	

	garland drain all along dumps are there	garland drain proposed all along dumps	garland drain are constructed all along the dumps.	
4i	Length of Retaining wall or garland drain all along dump	RW-100 mtrs GD- 75 mtrs	RW- 135 mtrs GD- 130 mtrs	Proposed RW & GD constructed.
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.	Lessee has made efforts to stabilize the part of the waste dump by laying coir mat and plantation over the slope of the dump. Systematic terracing of dump observed. Also, constructed retaining wall and garland drain at toe portion of the dump.		

### 5. Solid Waste Management-Backfilling

S.N.	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	No proposal	NIL	There is a no mined out area. Pit or part of the pit is not yet matured for backfilling.
5b	Area under backfilling of mined out area	No proposal	NIL	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	No proposal	NIL	Topsoil generated during the utilized for plantation and coir matting on dump slopes.
5d	Total area fully reclaimed & rehabilitated	No proposal	NIL	
5e	General remarks of inspecting officer on backfilling, reclamation etc	There is a no mined out area. Pit or part of the pit is not yet matured for backfilling.		

### 6. Progressive Mine Closure Plan

S.N.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2). Details should be given in the format.	PMCP report to be submitted by 1st July every year	PMCP report for the FY 2023-24 is submitted.	Submitted on 16.05.2024
6b	Area available for rehabilitation (ha)	0.27 Ha	0.64 Ha	Part of active dump is rehabilitated by coir mat (0.07 Ha) & plantation at green belt
6c	Afforestation done (ha)	0.27 Ha	0.64 Ha	Afforestation carried out at dump terrace, green belt, office premises & gap plantation
6d	No. of saplings planted during the year	150 No's	250 No's	As lessee team reported,

				85 no's - Green belt; 95 no's -gap plantation; 70 no's- office premises carried out.
6e	Cumulative no. of plants	----	8561 no's of seedlings 50100 no's of Agave suckers	Inside Lease Area from 2012-13 to 2023-24
6f	Any other specific method of rehabilitation	Rehabilitation by coir mat	0.07 Ha area is covered by coir mat	
6g	Cost incurred on watch & care during the year	No proposal	Rs. 75,992.00	Inside the lease area
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D)	No proposal	NIL	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Void filled by waste/tailings	No proposal	NIL	
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the 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	
6n	Compliance of Rehabilitation of waste land within lease (ii) Area rehabilitated (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 & buffer zone)	Environmental monitoring proposed in Core & Buffer zone	Environment al monitoring carried out in Core & Buffer zone.	Monitoring carried out by Cosmo Laboratory Ballari. The values are within the permissible limit.
6q	General remarks of inspecting officer on PMCP compliance & progressive closure operations	Lessee has carried-out all the proposed PMCP activities in the lease area. During last year, there was a lagging in construction of Toe wall and Garland drain for the active dump. During inspection, it is observed that lessee has also constructed backlog work.		

## 7. Mineral Conservation

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting proposed in the lease area	Grade wise sorting done in the lease area	As proposed, Fines & Lumps are dispatched after sorting out from the ROM
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical sorting proposed by crushing & screening method	ROM subjected to crushing & screening, lumps and fines with different grade sorted at mine site	Dry Crushing (150 TPH) & Screening (250TPH)
7c	Different grade of mineral sorted out at mines	Lumps & Fines	Lumps: (+10mm to -40mm) Fe: 58 - 60% Fe: 60 - 62% & Fe: 62 - 65% Fines: (-10mm) Fe: 51 - 55% Fe: 55 - 58% Fe: 58 - 60% Fe: 60 - 62% Fe: 62 - 65%	Grade wise sorting done at mine site
7d	Any beneficiation process at mines	No proposal	NIL	Mobile dry crushing & screening plant are utilized as per proposal.
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Lessee has adopted crushing & screening method to segregate the lumps & fines and different grade of iron ore.		

## 8. Environment

S.N	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 36)	8.80 m <sup>3</sup>	8.80 m <sup>3</sup>	
8b	Concurrent use or storage of topsoil	8.80 m <sup>3</sup>	8.80 m <sup>3</sup> utilized for coir matting & plantation.	Lessee has utilized the generated top soil in the slopes of the dump where coir matting is done and also utilized for plantation
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 37)	Separate dump for overburden proposed	Separate dump of overburden maintained	



8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	NIL	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	NIL	Pit is not matured for backfilling. Part of OB dump stabilized by coir matting & plantation.
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	-	Agave Suckers: 53,0100.00 no's Seedlings: 17,639.00 no's Seeds for coir mat: 920 kgs	As reported by lessee team, Total plantation carried out inside & outside ML from 2012-13 to 2023-24.
8g	Survival rate	No proposal	85 %	
8h	Water Mist 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 & water mist to control the air borne dust on haul roads & screening plant etc.	5 no' of water tanker of capacity 6000, 8000 litres and 12000 litres capacity of water mist is used.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	The asthetic beauty in and around maintained well. Lessee has carried out plantation outside lease (southern part of the lease) the plantation growth is very good.		

### 9. Compliance of Rule 45

S.N	Item	COMMENTS		Remarks
9a	Status of submission of Monthly & Annual returns	M.R. Submitted up to Aug 2024 A.R. Submitted up to 2023-24		MR submitted on 06.09.2024 AR submitted on 17.06.2024 for the FY 2023-24
S.N	Item	Details given in A.R.	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer – 02 nos. Diploma Mining Engineer – 01 Geologist - 01	Appears to be correct.	Following Mine officials were present during the day of inspection. Nandakumar HM, Mines Manager; Imran Shaik, Mining

				Engineer Shanmukhappa Mandal, Geologist.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit: 33.18 Ha Dump: 6.30 Ha Mineral Storage: 4.04 Ha Infrastructure: 1.14 Ha, Roads: 0.11 Ha Others: 8.39 Ha	Appears to be correct	The land use pattern tallying with the Drone data submitted and within the proposed extent.
9d	Scrutiny of Annual return on afforestation	Plantation lease 250 nos.	Appears to be correct.	Plantation carried out mainly in safety zone and on dumps.
9e	Scrutiny of Annual return on mineral reject generation (Grade & Qty)	No Mineral reject reported during the year.	Nil	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening Balance : NIL Production : 1100000 tonnes Closing balance : NIL  Dump Working: Opening Balance- 1575 tonnes Production: NIL Closing balance- 1575 (t)  Production (in tonnes) Lumps: 58-60% Fe- 44000 60-62% Fe- 176000 62-65% Fe- 92000.00 Fines: 51-55% Fe- 84000 55-58%Fe-224000 58-60% Fe- 264000 60-62% Fe-116000 62-65% Fe- 100000	Appears to be correct	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex-mine price Lumps - 58-60% Fe- Rs. 4255/ t 60-62% Fe- Rs. 5084.87 / t 62-65% Fe- Rs. 5486.39 / t Fines -	Given details appears to be correct	

		51-55% Fe- Rs. 2326.19 /t 55-58% Fe- Rs. 2828.03 /t 58-60% Fe- Rs. 3718.78 /t 60-62% Fe- Rs.4500.00 /t 62-65% Fe- Rs.5150.00 /t Cost of Production 1623.76 ₹/t		
9i	Scrutiny of Annual return on fixed assets	Rs. 84943014	Appears to be correct	
9k	Scrutiny of Annual return on mining machineries	Excavator - 9 No's Wheel loader - 3 No's Tipper - 16 No's Rock Drill - 1 No' Crusher - 3 No' Back Hoe - 2 No'	Given mining machineries observed at site during inspection.	

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

<u>Violation observed</u>			<u>Show cause position</u>		
Rule No.	Issued on	Compliance on	Rule No.	Issued on	Compliance on
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डॉ. सुधाकर टी.एल. / Dr. Sudhakara T. L.)  
वरिष्ठ खनन भूविज्ञानी / Senior Mining Geologist