

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

MCDR INSPECTION REPORT

Bangalore regional office

Mine file No : KNT/BLR/FE/394/BNG

Mine code : 30KAR03136

- (i) Name of the Inspecting : **A101**) **ARUN KUMAR**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : 1. R. Shivananda Reddy, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 04/12/2017
- (v) Prev.inspection date : 20/10/2015

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **RAMGAD(ML 1715)**
- (b) **Registration NO.** : **IBM/372/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **KARNATAKA**
- District : **BELLARY**
- Village : **DHARAMPUR**
- Taluka : **SANDUR**
- Post office :
- Pin Code :
- FAX No. : **08395260907/366, 944839550**
- E-mail : **vnk2543@gmail.com**
- Phone : **08395 - 260366**
- (f) **Police Station** : **Sandur**
- (g) **First opening date** :
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **SRI.V.N.K.MENON,**
correspondance **NO.6, KHB COLONY,**
SANDUR - 583 119.
3. (a) **Lease Number** : **KAR0255**
- (b) **Lease area** : **1.62**
- (c) **Period of lease** : **10**
- (d) **Date of Expiry** : **31/12/1991**
4. **Mineral worked** : **IRON ORE** **Main**

5. Name and Address of the

Lessee : V.N.K.MENON
 16,K.H.B.COLONY SANDUR
 BELLARY KARNATAKA
 Phone:
 FAX :

Owner : V.N.K.MENON
 CONTRACTOR, SANDUR,
 BELLARY, BELLARY KARNATAKA
 Phone:
 FAX :

Mining Engineer
 Name : IMRAN SHAIK,Full Time
 Qualification : BE MINING
 Appointment/ :
 Termination date

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

Manager
 Name : SURESH MANI
 Qualification : FCC
 Appointment/ :
 Termination date

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	28/02/1995
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	14/05/2013
		MS modif under MCR 1960	14/10/2014
		MP modif under 17(3) MCR 2016	08/11/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No Proposal	Core boreholes were drilled & completed & no further proposal in the plan period	34 core boreholes drilled during the period from 2011 to 2014 in a grid of 100*50 mts
1b	Exploration over lease area for geological axis 1 or 2	No proposal available	G1-4.808 Ha	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil	Not applicable	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Nil
1e	Balance reserve as on 01/04/20		Mineral Reserves - 2008780 tones as on 1.4.2017	As per Approved SoM, Remaining Resource- 1416776 tones
1f	General remarks of inspecting officers on geology, exploration etc			34 core boreholes drilled during the period from 2011 to 2014 in a grid of 100*50 mts. 4.808 Ha is covered under G1, which is mineralized area.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposed location of development: N1666250 to N1666550 E662550 to E662650	Within the Specified grids and 914 to 900 Levels	Nil

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in overburden and mineral proposed	Separate benches in overburden and mineral maintained Top Soil - NA OB - Nil SG - 1 No. Mineral - 7 No.	Proposed to work within broken up area, hence there was no generation of top soil
2c	Stripping ratio or ore to OB ratio	1:0.11	1:0.035	Lower stripping ratio due to higher recovery
2d	Quantity of topsoil generation in m3	No proposals	Not applicable	No top soil generated
2e	Quantity of overburden generation in m3	Waste - 2466 tones BHQ - 13317 tones	Waste - 2490 tones BHQ - Nil	No BHQ was handled during the year, as there were no BHQ bands in the working area
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The developments were done within the proposed grids with stripping ratio of 1:0.035. BHQ was not mined out due to lower production capping by CEC.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	01 pit was proposed for production	Workings in one pit only. Dimension are: Length - 220m,Width - 200m,Depth - 20 to 40m	There is only one pit area of 4.0Ha.
3b	Quantity of ROM mineral production proposed	130000 tones	130000 tones	CEC Monitoring committee approved only 71000 tones out of 130000 tones planned for the FY 2016-17
3c	Recovery of sailable/usable mineral from ROM production	130000 tones	130000 tones	-
3d	Quantity of mineral reject generation	No Proposal	NA	No mineral reject generated

3e	Grade of mineral rejects generation and threshold value declared.	No Proposal	NA	-
3f	Quantity of sub grade mineral generation.	Lateritic Ore - 2456 tones	Lateritic Ore - 2456 tones	Lateritic ore blended with high grade ore.
3g	Grade of sub grade mineral generation	+45 to 50% Fe	+45 to 50% Fe	-
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method with dry crushing & screening.	Mechanized method adopted for segregating from ROM with the help of crusher & screening	300 tons/Hr screening unit in operation
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposals	NA	-
3j	Provision of drilling and blasting in mineral benches	Yes, Provision are made for drilling & blasting in mineral benches	1. Diameter of blast hole drill - 100mm. 2. Depth of hole - 7m 3. Charge /hole - 25kg (slurry explosive), 4. Blasting pattern - Staggered pattern 5. The charge/delay - 25kg, 6. Maximum no. of holes blasted in a single shot - 20nos. 7. Spacing & Burden - 3m & 3.5m, 8. Tonnage factor - 3, 9. Efficiency - 80%	Complied
3k	Provision of mining machineries in mineral benches	Yes, Provision made	1. Ex-240 - 1.1m ³ - 1no., 2. Screen - 300tons/hr - 1no. 3. Crusher - 120tons/hr - 1no., 4. Dumpers - 35 tons - 2no 5. Water Tanker - 10000ltrs - 1no.	Machineries used in the mines are as per the proposal.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	OB - 7mtrs Mineral - 7mtrs	OB- 5 to 7mtrs. Mineral - 5 to 7mtrs	There are 8 benches; out of which 7 benches are in ore & 1 in OB. Height of benches in overburden and mineral are suitable for method of mining.

3m	Total area covered under excavation/pits	4.0 Ha	4.0 Ha	Workings are confined with in the broken area
3n	Ore to OB ratio for the pit/mine during the year.	1:0.11	1:0.035	Lower stripping ratio due to higher recovery
3o	Total area put in use under different heads at the end of year	1. Area under Mining - 4.0Ha, 2. OB Dumps - 1.4772Ha 3. Infrastructure - 0.0097Ha, 4. Roads - 0.5594Ha 5. Green belt - 1.4496Ha, 6. Others - 2.81Ha,	1. Area under Mining - 4.0 Ha, 2. OB Dumps - 1.4772Ha, 3. Infrastructure - 0.0097Ha 4. Roads - 0.5594Ha, 5. Green belt - 1.4496Ha, 6. Others - 2.8139Ha Total :10.31Ha	-
3p	Production of ROM mineral during the last five year period as applicable	(in tones) 2011-12: 300000 2012-13: Nil 2013-14: 43000 2014-15: 130000 2015-16: 130000 2016-17: 130000	(in tones) 2011-12: 171403 2012-13: Nil 2013-14: 43000 2014-15: 43000 2015-16: 43000 2016-17: 71000	Monitoring Committee had approved 43000 tones for the FY's 2013-14 to 2015-16 & for the FY 2016-17 Approved qty 71000 tones.
3q	General remarks of inspecting officers on method of mining etc.			The mineral is worked from one pit as per proposal. Drilling & blasting is carried out in few of the benches. Lateritic ore of +45% Fe, which is treated as sub grade is blended with high grade ore. The productions are well below the quantity approved in the document.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of OB & subgrade proposed Top Soil - Nil,OB - 2466,Sub Grade ;1) Laterite - 2456,2) BHQ - 13317	Top Soil - Nil,OB - 2490 Sub Grade; 1) Laterite - 2456 2) BHQ - Nil	There is no Top Soil, Mineral rejects were not generated for the FY.Sub grade ore was blended with high grade ores
4b	Location of topsoil, OB and mineral reject dumps	N1666350 to N1666470 E662635 to E662720	N1666550 to N1666600 E662830 to E662890in between section lines DD1to EE1	The disposal of OB was not as per the proposed area. Violation pointed out
4c	Number of dumps within lease area and outside of lease area	01 with in the lease area	One OB dump within the lease area	-
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	The location of the dump proposed is outside the UPL	The location of the dump is outside the UPL	N1666350 to N1666470 E662635 to E662720
4e	Number of active and alive dumps.	01	01	-
4f	Number of dead dumps.	No Proposal	Nil	-
4g	Number of dumps established.	No proposal	Nil	-
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall was proposed all along the toe of the dump	Retaining wall & garland drain are Constructed as per plan.	complied
4i	Length of Retaining wall or garland drain all along dumps	RW1 - 137mtr,RW2 - 260mtr,GD1 - 150mtr,GD2 - 160mtr	RW1 - 188mtr,RW2 - 260mtr,GD1 - 225mtr,GD2 - 160mtr	All dump management structures constructed as per plan.
4j	Number of settling ponds	01	SST1 - 600 Cubs. Mtr SST - 400 Cubs. Mtr	Constructed 2no SST within lease area.

4k	Specific comments of inspecting officer on waste dump management	The dumping and location of solid waste was not done as per the proposal. The dumping location has been changed, however retaining wall with garland drains have been constructed at the toe of the dumps with settlings tanks. The total area covered by dumping is 1.47 Ha.
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Solid Waste Management - Backfilling:

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	NA	-
5b	Area under backfilling of mined out area	No proposal	NA	-
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	NA	-
5d	Total area fully reclaimed and rehabilitated	No proposal	NA	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.			None of the areas of mined out pits were matured for backfilling due to occurrence of mineral at depth.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	-	Submitted as on date: 21.07.17	Submitted
6b	Area available for rehabilitation (ha) .	No proposal	0.02 Ha covered under plantation	-
6c	afforestation done (ha).	No proposal	0.02 Ha covered	-
6d	No. of saplings planted during the year	No proposal	330no.	-
6e	Cumulative no .of plants	2760 no	42280 no	-
6g	Cost incurred on watch and care during the year	No proposal	Rs. 15098 spent on watch & care	-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal	NA	-
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	NA	-
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring (core zone & buffer zone) proposed	Regular Environmental monitoring done at core & Buffer Zone	All the parameters within the permissible limits
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP activities were carried out as per the approved plan and plantation done, construction of retaining wall and garland drains were in place.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Proposed	Fines - 51999.92 tons Lumps - 27006.02 tons	Grade-wise Lumps & fines sorting within lease area
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Dry screening with screen module extec mobile screen.	-
7c	Different grade of mineral sorted out at mines.	Ore: +50%Fe Laterite: +45%Fe	Fines: 62-65%Fe Lumps: 62-65%Fe	Laterite: 2456 tones blended with high grade.
7d	Any beneficiation process at mines	No proposals	Dry crushing & screening for physical separation.	No other beneficiation process adopted.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral conservation is taken care. The lateritic ore with +45%Fe is blended with high grade to conserve the ore. Separate dump of BHQ is maintained for future use.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No Proposal	NA	Present workings within broken out area.
8b	Concurrent use or storage of topsoil	No Proposal	NA	Earlier generated top soil utilized for plantation
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	OB Dump: N1666350 to N1666470 E662635 to E662720	N1666550 to N1666600 E662830 to E662890in between section lines DD1to EE1	Violation Pointed out
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	NA	-

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposal	NA	Retaining wall & garland drains along with the settling tanks constructed below the dump.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Available	330nos planted done	WML: 280no OML: 50no
8g	Survival rate	No proposal	WML: 90% OML: 80%	-
8h	Water sprinkling on roads to control airborne dust	Provision is made	Adequate	1 no Water Tanker (10000 ltr) used for sprinkling water on roads to control airborne dust.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty in and around the mine is good as licensee carried out R & R works and other environment protection measures.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	-	M.R. Submitted up to Oct - 2017 A.R. Submitted up to 2016-2017	AR submitted on 30.06.2017
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	MM - R. Shivananda Reddy	Name of the Mining Engineer was missing in AR	Whole time Geologist is not appointed. Mining Engineer appointed does not possess adequate experience. Violation pointed out.

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	1. Area under Mining - 4.0 Ha, 2. OB Dumps - 1.4772Ha, 3. Infrastructure - 0.0097Ha 4. Roads - 0.5594Ha, 5. Green belt - 1.4496Ha, 6. Others - 2.8139Ha Total 10.31Ha	Appeared to be correct
9d	Scrutiny of Annual return on afforestation	WML: 280no - Survival Rate - 90% OML: 50no - Survival Rate - 80%	Appeared to be correct
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening Stock - 9435 tones Production - 71000 tones Closing Stock - Nil	Appeared to be correct
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Average Sale Value - 3038 Rs/ton Ex-mine Price - Lumps - 2141 Rs/Tonn Fines - 1993 Rs/Tonn Cost of Production - 651 Rs/Tonn	Appeared to be correct
9h	Scrutiny of Annual return on fixed assets	Rs. 6042766	Appeared to be correct
9k	Scrutiny of Annual return on mining machineries	Excavator - 2no Dumpers - 2no Water Tankers - 1no	Appeared to be correct

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

Violation observed			Show cause position		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on
MCDR17	Rule 11(1)	20/12/2017			
MCDR17	Rule 19(1)	20/12/2017			
MCDR17	Rule 55(1)(3)	20/12/2017			

Date :

(ARUN KUMAR)

Indian Bureau of Mines